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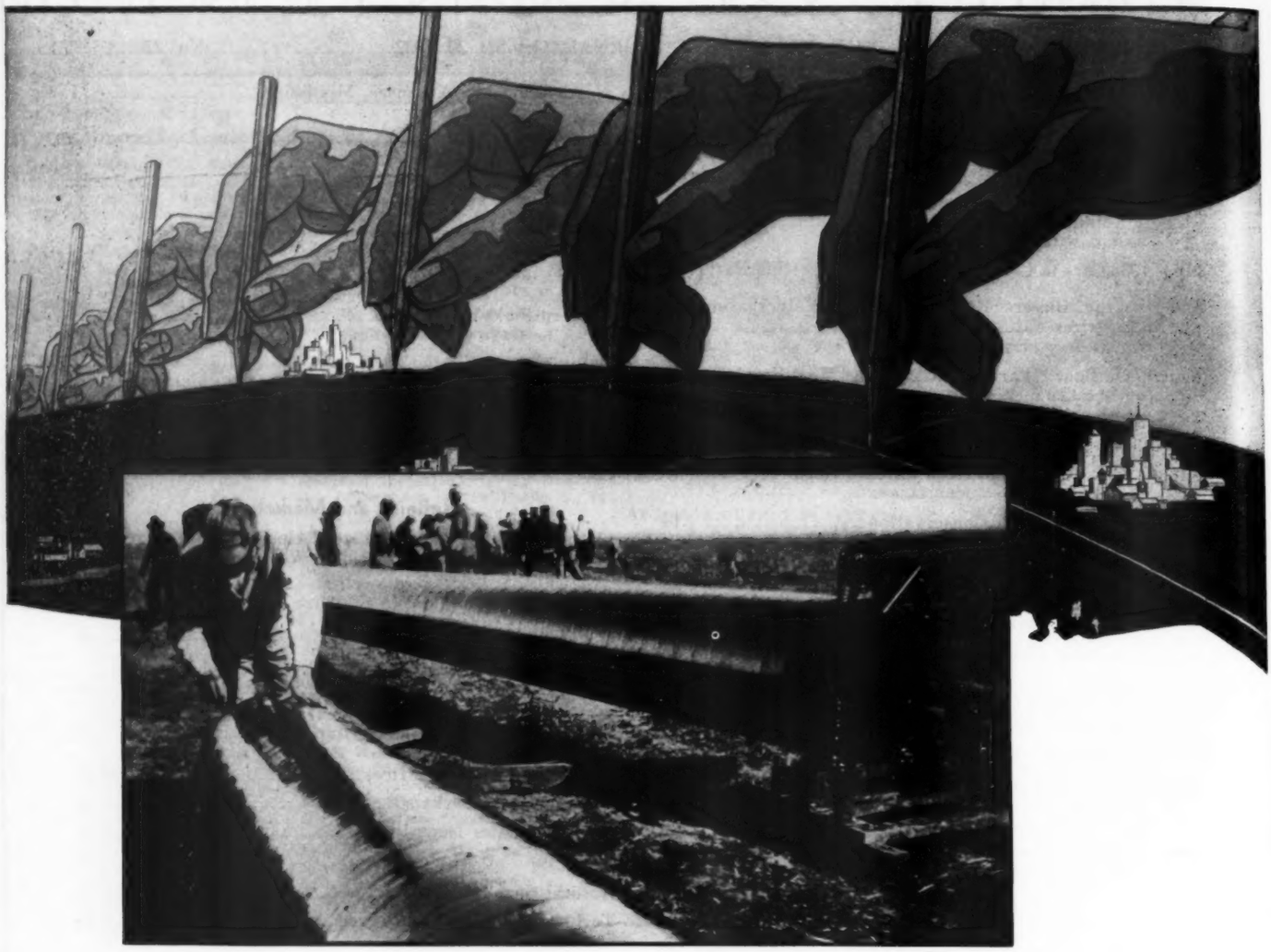
NO POINT ON A PIPE LINE CAN ESCAPE



NO engineer ever says, "Soil conditions seem favorable here so we'll lay an inferior grade of pipe". There are, however, rare occasions when some of them *still* say, "We'll do without a coating here or we can use a cheaper coating at this point".

The truth is that, irrespective of the soil and irrespective of the coating, all steel pipe buried underground will eventually fail from corrosion and from nothing else. No point on any such line can escape this ultimate fate.

When uncoated pipe is buried in corrosive soil this failure will come soon. When soil conditions are supposed to be favorable this failure is postponed but not avoided. Application of a coating will still further postpone the failure.

Economic calculations depend upon the accuracy of the data. Soil conditions are frequently a variable difficult to calculate. Effective coating is a *certainty*. Why take chances?

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Producers Can Make the Higher-Price Schedule General by Obeying Commissions' Orders

By JAMES McINTYRE

A PRODUCTION of 2,000,000 barrels of crude oil per day in the United States is sufficient to meet present market demand, and the Railroad Commission of Texas, the Oklahoma Corporation Commission and the Kansas Public Service Commission have taken action which if co-operated in by oil producers of the three States will bring production down to the required level.

No one need worry about what Kansas and Oklahoma producers will do. They will meet all the curtailment requirements which present-day industrial conditions thrust upon them. As a matter of fact Kansas and Oklahoma producers have for a long time been producing less oil per day than the quantity allocated to them by any of the bodies suggesting curtailment of production by states.

The whole situation is squarely up to Texas producers. They have been called upon to produce a maximum of 791,705 barrels per day, of which quantity the East Texas Field is allowed a daily production of 335,000 barrels per day. The lower-production orders in all three States are now in effect.

For the week ending Saturday, October 15, Texas produced 95,296 barrels in excess of the new allowable in that State, of which East Texas contributed an excess of 32,998 barrels. This 95,000-barrel excess must be withheld from production if producers in Texas expect to realize a general increase in crude oil prices.

Last week a number of major and minor companies announced substantial increases in crude oil prices effective on October 15 in Kansas, Oklahoma, Texas, southeastern New Mexico, Louisiana and Arkansas, in anticipation of a cut in production that would warrant such price increases. However, it was not general. Standard Oil Co. of Indiana and the Standard Oil Co. (New Jersey) through their purchasing subsidiaries in the southwestern states did not meet the new price schedule and declare they will not if overproduction and other named bad factors continue.

They put the situation up to the industry, and the inference the reader gets from their respective statements is that if conditions warrant it they will fall into line with the other majors like Sinclair Prairie Oil Marketing Co., The Texas Company, the various Gulf subsidiaries, the Magnolia Petroleum Co., Shell Petroleum Corp. and others.

It is a critical situation requiring honest co-operation on the part of all branches of the industry interested in stabilizing the oil business.

Crude Oil Production in the United States

Estimated daily average production for the week ending October 15 and a comparison with previous week and one year ago, follows:

	Oct. 15	Oct. 8	Oct. 17, 1931
Oklahoma—			
Oklahoma City	57,370	69,640	165,715
Seminole-St. Louis	105,430	114,320	122,360
Remainder of State	209,740	196,955	217,140
Total Oklahoma	372,540	380,915	505,215
East Texas—			
Lathrop	141,637	149,953	113,331
Kilgore	109,256	114,895	160,513
Joiner	117,105	129,310	148,345
Total East Texas	367,998	394,158	422,189
West Texas	165,614	169,987	202,487
North Central Texas	72,485	73,705	80,416
Texas Panhandle	48,552	41,716	64,918
East Central Texas	52,336	54,236	56,195
Gulf Coast Texas	118,294	134,222	118,256
Southwest Texas	61,722	57,948	62,955
Total State of Texas	887,001	925,972	1,007,416
Kansas	101,760	99,540	101,670
North Louisiana	29,795	30,415	29,505
Gulf Coast Louisiana	33,238	33,761	30,335
Arkansas	33,905	34,025	37,970
Eastern fields	116,000	115,000	116,000
Rocky Mountain area	73,204	73,761	92,759
California—			
Santa Fe Springs	59,000	58,000	60,000
Long Beach	68,750	68,000	74,750
Playa Del Rey	15,500	15,500	20,750
Elwood	13,250	13,500	24,750
Kettleman Hills	60,500	58,750	64,000
Remainder of State	254,000	257,000	263,750
Total California	471,000	470,750	508,000
Total United States	2,118,443	2,164,139	2,428,870

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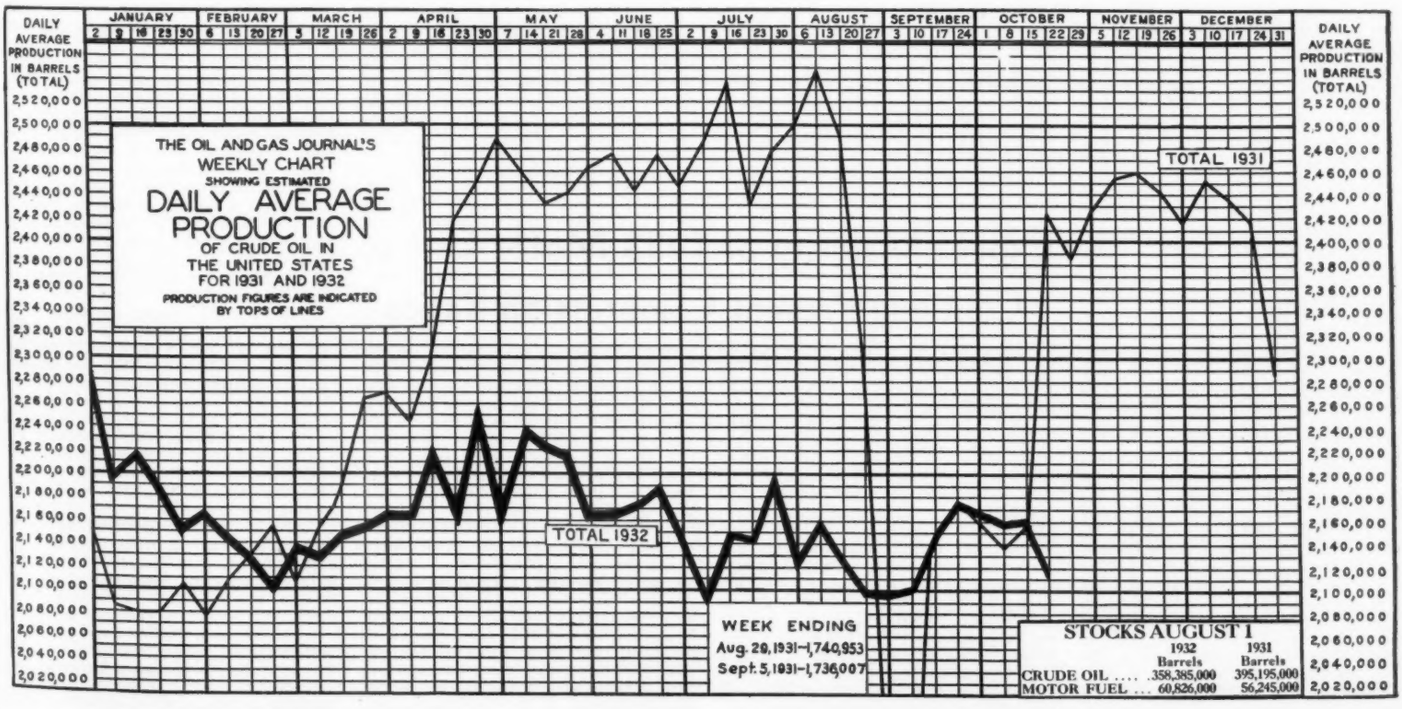

Automotive Engineers Approve New C.F.R. Test and Suggest Retail Ratings for Gasolines

By C. O. WILLSON

DETROIT, Mich., Oct. 15.—The new C.F.R. Motor method for determining the antiknock performance of motor fuels, involving important changes in the relative values of gasolines when compared with ratings given by the former C.F.R. method, is satisfactory to the automotive industry, according to representative opinions expressed by engineers connected with local manufacturers. Apparently the changes made in the antiknock testing methods are receiving more general approval from the automotive engineers than they are within the oil industry where individual companies are still at work endeavoring to determine the effect the ratings will have on their refinery and marketing operations. The attitude of many of the refining companies is to await more definite information from their laboratories covering the application of the new testing procedure before expressing opinions.

The viewpoint of the testing departments of the automobile manufacturers is that the method will give them a much more accurate yardstick with which to determine the performance of their engines with the wide variety of motor fuels now available. Some believe that additional changes may be necessary later, while others are of the opinion that the present test should satisfy all the practical requirements of the engine manufacturers. The latter were largely responsible for the work of the C.F.R. committee in correlating road and laboratory tests from which the new laboratory method was evolved. Service departments of several manufacturers over the past year have had complaints from dealers and customers that certain gasolines performed satisfactorily with their cars while others did not. In many cases laboratory tests of these fuels gave them practically the same antiknock rating. This led to work on the part of individual companies which left no doubt in the minds of the testers that laboratory ratings of motor fuels did not in all cases check with road performance. This situation included some motor fuels rated as premium grades.

The position of the engine manufacturers is obvious. Engines in general are designed to operate either with the premium grade gasolines which means Ethyl Gasoline or its equivalent, or the regular grades. A third class might be added to include the manufacturer who takes the position that his engine will operate satisfactorily with any grade of commercial gasoline.

In making changes in engine design the car manufacturer obviously must have a laboratory test which checks with actual performance. It is said that the failure of the old test to do this accurately resulted in an important change in engine design of at least one new car this year after it had been placed on a production basis and many cars in the hands of customers.

Desire Antiknock Ratings

In this connection it is apparent that the oil trade will continue to have requests from at least some of the car manufacturers for an antiknock rating of motor fuels which they can use in making recommendations to their customers covering the grade of motor fuel to be used with their cars. This plan, to which objections have been made by many in the oil trade, is still in the minds of the automotive engineers and will be brought forward for action more in the future than it has in the past.

"With this new C.F.R. Motor method in general use within the oil and automotive industries, including commercial laboratories, I see no reason why some plan cannot be worked out by which gasolines can be classified as to antiknock rating in a manner which will be understood by the car owner," one engineer said. "There is no reason why the owner of an old car with low compression should buy a high octane gasoline and, at the same time, if he has a new high compression car he should have some method of knowing that the gasoline he buys will perform satisfactorily."

In expressing a similar opinion a representative of another manufacturer said reports from their testing laboratories over the past few months had reflected a steady improvement in some of the regular grades of motor fuels while others had not changed. In some cases the improvement was as much as 8 octane numbers based on the old method of testing. He pointed out that the best of these gasolines deserved a premium or near premium rating and car manufacturers, if they had a suitable measuring stick, would be in a position to approve them for their newer type engines. At the same time, several gasolines now classed as regular would be given a lower rating due to their low antiknock value. His company's tests show a variation between high and low of 10 octanes in the regular white grades as sold by major distributors, with lower ratings on unbranded gasolines which are white in color.

So long as this condition exists, it was claimed, it will be impossible for car manufacturers to take full advantage of the improvement of motor fuel quality with improved engine design and refiners of the best grades of motor fuel will not obtain the recognition from the consuming trade to which they are entitled.

Asked what plan of rating fuels should be adopted, the engineers generally call attention to the number ratings of the Society of Automotive Engineers covering motor oils. As is generally known, these numbers which classify motor oils largely on a viscosity basis, have been used for several years despite strong objections by several oil refiners. From the standpoint of the manufacturers, these number ratings or classifications which are used in making recommendations to car owners are given a large part of the credit for solving that motor oil problem of the manufacturer. Before the adoption of these numbers it is claimed that service departments constantly had complaints from car owners due to the fact that they did not know how to buy the oil suitable for motor lubrication.

As another angle to this problem of antiknock testing the head of the research department of a large manufaeturer—not in Detroit—expressed the hope that research work would be carried on with the view of developing a simpler method than the engine test to determine the antiknock properties of motor fuels. While supporting the work of the C.F.R. committee in perfecting the present engine test, he believes that a chemical analysis or some physical test other than an engine can be developed, which will better satisfy the requirements of both the automotive and oil industries. He points out that while an engine could be used in making volatility, viscosity and some of the other tests of motor fuels and oils, that simple laboratory tests are generally used and satisfy the usual practical requirements of testing. He emphasizes the many variable factors when laboratory tests are applied to the many designs of commercial engines.

Motor Oils Satisfactory

The automotive engineers are inclined to be highly complimentary to the oil refiners in regard to motor oils. The oils have been improved to the point where motor troubles due to improper lubrication are a rarity.

When the third grade motor oils were introduced in Detroit and many other points throughout the Middle West, manufacturers were concerned fearing service troubles with the cheaper oils. Samples were collected and both laboratory and road tests were made. While, in general, the laboratory tests showed that the cheaper oils did not duplicate in specifications the regular and premium grades, they came within the permissible limits so far as motor performance is concerned and no trouble has been reported by the car owners and none is expected.

Due to the better refinements of oils the emulsion and oxidation troubles of which so much was heard a few years ago are now largely a thing of the past. This situation has developed despite the higher speeds and other phases of modern engine operation commonly associated with motor oil problems.

In regard to motor oils, one manufacturer stated their only concern was to get their customers to use a low viscosity oil and at the same time not have complaints regarding supposedly high consumption. The latter is not objectionable to the car manufacturer but it is to the average car owner. The objection of the manufacturer is based not so much on the relative lubricating properties of the low and high viscosity oils, but is due to the engine starting problem with the heavier and higher cold test lubricants.

Extreme Pressure Lubricants

Those who are specialists in the lubricating oil requirements of motor vehicles are authority for the statement that satisfactory progress is being made in securing the necessary extreme pressure lubricants. This is being accomplished both by making a study of the properties required in lubricants and also changing mechanical design where possible so that special oils are not needed. In this matter also the automotive engineers are pleased with the co-operation they are receiving from several of the larger refiners of lubricating oils. "The problem of extreme pressure lubricants is not due to refiners not being able to refine the oils, but is a matter of determining just what oils are needed," one engineer explained and stated that so far as his company was concerned they considered the problem largely solved. He said that an increasing number of the larger refiners and compounders were now manufacturing suitable extreme pressure oils for free wheeling and other new features in motor vehicle design.

Expect Majority of 1933 Motor Cars to Continue Present Compression Ratios

DETROIT, Mich., Oct. 15.—Engines for the 1933 cars are not to show any increases in compression ratio over those of the 1932 cars.

This appears to be a general conclusion of the local automobile trade to which there may be one or two important exceptions. No official announcements have been made regarding the 1933 cars and little unofficial information is available at this time. It is commonly reported that certain manufacturers are perfecting engines in their development departments which are termed radical departures from present design, including compression ratios. However, due to business conditions, it is not believed that these engines will be introduced at this time even in cases where they have been perfected to the point where they are available for commercial production.

The introduction of important changes in engine design, it is pointed out, involves a heavy manufacturing and sales cost which would not be justified on a basis of the probable car sales over the first part of 1933 at least. Important changes in engine design, it is assumed, will await a return to normal times when there are greater possibilities in stimulating sales.

So far as known, manufacturers will continue the compression ratios introduced this year. These ratios involved important increases in many cases over the previous year. As was the case this year the greatest interest centers in the low-priced cars which are expected to constitute the great bulk of new car sales over the coming year. Among these cars, it is rumored, there will be changes in body design.

Twenty Million for New Construction and Refinery Maintenance

NEW YORK, Oct. 17.—Standard Oil Co. (New Jersey) plans the expenditure of $20,000,000 during the period September 1, 1932, and June 30, 1933, for maintenance and improvement in the United States, according to S. B. Hunt, vice president and treasurer.

In response to an inquiry by A. W. Robertson, chairman of President Hoover's Committee on Industrial Rehabilitation, Mr. Hunt made the following statement in regard to the company's immediate plans for carrying out rehabilitation work on its domestic properties:

"It has always been the policy of Standard Oil Co. (New Jersey) to maintain its facilities and equipment at a high degree of efficiency, and we have been and are continuing to carry on with this policy in anticipation of improved business conditions.

"Our present plans contemplate a capital outlay of approximately $20,000,000 over the period between September 1, 1932, and June 30, 1933, for maintenance and improvements in the United States alone."

A.P.I. DIRECTORS MEET

The meeting of the board of directors of the American Petroleum Institute at Excelsior Springs, Mo., was occupied by routine business.

Amos L. Beaty, president of the Institute, said "some favorable trends have been showing up in the oil fields. Prices have advanced and the problem of control of production to harmonize with present-day demand is being worked out."

W. N. Davis, of Phillips Petroleum Co., said crude oil buyers were falling into line with the current price increase, and indicated "alowable production is being adjusted to balance the demand."

Some Large Buyers Refuse to Join in Increasing Crude Oil Prices in Southwestern District

By JAMES McINTYRE

On Saturday, October 15, the promised rise in crude oil prices inaugurated by the Sun Oil Co. in East Texas and the Gulf Coast, to become effective on the above date, had spread to all fields in Kansas, Oklahoma, Texas, North Louisiana and Louisiana Gulf Coast, Arkansas and the Hobbs Pool in New Mexico.

All the largest companies excepting the Standard Oil Co. (New Jersey) and the Standard Oil Co. (Indiana) had generally raised their prices, and many of the smaller oil buyers that post prices, or that base their prices on those of one or another of the large companies' schedules, were in line. The Standard Oil Co. (New Jersey) represented in Kansas and Oklahoma by the Carter Oil Co., in Texas by the Humble Oil & Refining Co. and in Louisiana and Arkansas by the Standard Oil Co. of Louisiana, had made no statement up to the close of the day on which the price rise was to become effective; but on Monday, October 17, the Humble and the Carter companies issued statements in which they said they would not meet the new prices at this time.

The Carter Oil Co.'s statement was brief, saying: "As our customers advise us they cannot afford, on current product prices, to pay increased prices for crude oil, we will, until further notice, continue our present price schedule."

The Humble Oil & Refining Co. posted a price, effective 7 a.m., October 1, for crude oil in East Texas where it has previously paid the going price of other purchasers without any posting of its own. The new posting is 98 cents per barrel.

Humble States Its Position

In connection with this new posting, which does not meet the price advance of October 15, posted by other crude oil purchasers, the company issued the following statement:

"The Humble Oil & Refining Co. reiterates its position in support of conservation to the end that: all waste be prevented; correlative rights of competing producers be protected; and likewise reiterates its belief in fair prices to producers of crude oil and to consumers of gasoline.

"We met the price advance in April of this year, at which time we said:

" 'This company desires higher prices for crude oil just as much as any producer does, but it is convinced that higher prices can prevail only if they rest on a firm economic foundation. Present product prices do not justify purchasers in paying more for crude. This price advance is admittedly based on the hope that better product prices and improved economic conditions generally will follow. Over the period of five months since the last price advance in November, 1931, this company had been unable to secure for products from its refineries and from the operation of its transportation system to its refineries any profit on the crude bought, transported and refined. At the present time it is buying more oil than it wants, and it has endeavored persistently during recent weeks to reduce its takings; but it has been unable to do so without working a hardship on the producers whom it serves.

" 'Producers cannot hope to command a higher price for crude oil as long as the amount they offer for sale is greater than purchasers are willing to buy. Balancing supply with demand is imperative if the new price schedule is to be maintained. Responsibility for securing this balance rests squarely upon those who have initiated and sponsored this price advance, including the producers, trade organizations, newspapers and officials!'

"The conditions stipulated in this April statement as prerequisite to a sound price advance have not yet been realized. The demand for crude has never been equal to the supply in all areas, as is evidenced by the fact that many properties are still without connections and are begging for buyers. Product values over the period since the last increase have not warranted the prices paid for crude oil. The maintenance of those prices has entailed a continuing substantial loss for all refiners operating on purchased crude.

"The sponsors of the present crude oil price advance and curtailment program promise that a balance between supply and consumption demand will be attained; that production in excess of allowables will be eliminated; and that wholesale product prices will be realized that will justify the crude oil price advance. We earnestly hope and we believe that these promises can be fulfilled, but we are unable to increase the existing disparity by paying higher prices under present conditions. In the light of past experience, deliberate consideration compels us to await the fulfillment of these promises before posting higher prices."

Standard of Indiana's Position

On Friday, October 14, the Standard Oil Co. (Indiana), which purchases crude oil in Kansas, Oklahoma and Texas, through its subsidiary, the Stanolind Crude Oil Purchasing Co., issued the following statement of its position:

"Officials of Standard Oil Co. (Indiana) announced today that their company cannot advance its posted prices for crude oil despite the recent action of certain other companies.

"Conditions do not warrant even the present prices and will not give necessary support to an increase.

"Everybody in the industry knows that with consumption of gasoline falling off enormously price-cutting is rampant throughout the oil business. Although producers are making commendable efforts to control their problems, crude is still being produced in excess of demand. Some of it is being run illegally and sold at prices that jeopardize the posted price structure. Refineries are manufacturing more gasoline than is needed. Many are dumping at cut prices. Aided by rising taxes, tax evaders are wrecking retail markets wherever they operate. There is also much retail price-cutting by reputable marketers who are striving to hold volume of sales regardless of profits.

"The Indiana company is sincerely desirous of seeing producers receive a satisfactory price for crude. But it is convinced that an advance in the face of present conditions will simply provide leeway for further abuses and delay progress toward permanent recovery in the oil industry. It believes that the sound road toward better prices for both crude and finished products is by way of first correcting the fundamental conditions which will control eventually, no matter how they are temporarily overlooked in eagerness for better returns."

Shell Joins in Posting Prices

For the first time in its history the Shell Petroleum Corp. issued schedules of posted prices effective wherever the company buys in the Mid-Continent and Gulf Coast Fields. The schedules met all the price increases of competitive companies.

It was related last week that the Sinclair Prairie Oil Marketing Co. was the first company to advance prices in Kansas, Oklahoma, East Central and North Central Texas 12 cents per barrel on all grades, from below 29 degrees up to 40 degrees and over, at the same time meeting the Sun Oil Co.'s 12-cent advance flat in East Texas, and that the Phil-Tex Oil Co. had initiated an advance of 9 cents per barrel on all grades in Carson, Hutchinson and Moore Counties in Texas from 29 degrees at 65 cents up to 40 degrees at 87 cents; and an 11-cent advance in Gray County, Texas, from 29 degrees at 77 cents up to 99 cents for oil of 40 degrees and above.

Texas Company's Leadership

On Thursday, October 13, The Texas Company met the Sun Oil Co.'s East Texas price; the Sinclair Prairie Oil Co.'s Oklahoma and North and Central Texas prices; raised its prices 9 cents per barrel in Carson and Hutchinson Counties, Texas; 11 cents per barrel in Gray County, Texas; 10 cents per barrel in Smackover, Arkansas; 10 cents per barrel in Darst Creek, Texas; 10 cents per barrel in West Texas and Lea County, New Mexico; 12 cents per barrel in North Louisiana and 10 cents per barrel in the Gulf Coast. Thus The Texas Company led the way in West Texas, New Mexico, Southwest Texas, North Louisiana and Arkansas, and led the way in a number of Gulf Coast pools, as it is a more extensive purchaser and shipper of Gulf Coast oil than the Sun Oil Co., which initiated the new 10-cent increase in the Coastal area. The action of The Texas Company was received enthusiastically by producers everywhere as it was the first of the very large companies to follow the example set by the Sun Oil Co. and the Sinclair Prairie Oil Marketing Co.

The Texas Company's prices in Gray, Carson and Hutchinson Counties differed from the Phil-Tex Oil Co. prices in that they start at below 35 degrees at 87 cents in Gray and at 75 cents in Hutchinson and Carson Counties, but being the same as the Phil-Tex prices on the grades from 29 degrees upward.

The Gulf Pipe Line Co. met The Texas Company's prices in the Texas Panhandle; the Sun Oil Co.'s price in East Texas; the Sinclair Prairie prices in North Texas, Central and East Central Texas; met The Texas Company's prices in the Gulf Coast, but stopping at 35 degrees and above at $1.01 and the Gulf Refining Co. met The Texas Company's Louisiana prices and advanced its El Dorado, Arkansas, prices 12 cents and its Smackover price 10 cents and met The Texas Company's 10-cent advances in West Texas, Southwest Texas and in Lea County, New Mexico. The Gypsy Oil Co., another Gulf Oil subsidiary, met the 12-cent advance in Kansas and Oklahoma.

Magnolia Joins the Price Boosters

All through the Mid-Continent fields the action of the Magnolia Petroleum Co., a Standard Oil unit, was awaited with the keenest interest. Up to Friday afternoon none of the Standard companies had given any indication of its intentions as to the proposed price advance. It was quite generally believed that if one of the Standard units joined in the upward price movement that all of them would, but while the Magnolia officials were framing their price rises, Standard of Indiana officials were preparing their statement as to reasons why their company would not advance prices. The two Standard statements were issued about the same time.

The Magnolia and the White Eagle Oil Corp., both Socony-Vacuum subsidiaries, met all price advances, and instituted some of their own. The White Eagle Oil Corp. increased its prices 12 cents in Kansas and the Magnolia increased 12 cents in Oklahoma, North Texas, East Central Texas and Central Texas, the only difference between its prices and others being that for oil below 28 gravity it pays 79 cents per barrel. It adopted The Texas Company prices in the Panhandle; pays $1.10 in East Texas; raised Winkler, Crane, Upton, Howard, Glasscock and Mitchell crudes to 75 cents but left Mirando crude at 90 cents; raised Darst Creek to 85 cents; Luling and Corsicana heavy crude to 74 cents; Lytton Springs to $1 and moving over to North Louisiana it posted a 12-cent advance in all its prices in Pine Island, Haynesville, Bull Bayou, and Cotton Valley, and in El Dorado (light oil) and Rainbow districts in Arkansas, and boosted Smackover and El Dorado East Field to 75 cents; and in South Louisiana gave the Lockport and Iowa fields a 10-cent increase in all grades, with a top of $1.10 for 40 gravity and over and a 10-cent increase in Cameron Meadows with a top price of $1.

The Phil-Tex Oil Co., Standish Oil Co., Deep Rock Oil & Refining Co., Skelly Oil Co., Barnsdall Refineries, Inc., Empire Pipe Line Co., Pure Oil Co., Continental Oil Co., National Refining Co., Producers Oil Co., Vickers Petroleum Co., Panola Pipe Line Co., Toronto Pipe Line Co., Louisiana Oil & Refining Co. Kanotex Refining Co., H. L. Hunt Co., and Arkansas Fuel Co., had all joined by the close of the week in the price increases in the fields in which they purchase, each of them paying the new prices in the respective fields.

Like the Situation in April

The present effort to get crude oil prices on a higher level along with an effort to get production down to refinery demand, part of the companies posting higher prices and others holding off, is like the situation in April when the Continental Oil Co. started a general upward price movement on April 1. While many companies immediately joined in the advances the Stanolind Crude Oil Purchasing Co., Carter Oil Co., Humble Oil & Refining Co., Gypsy Oil Co., Mid-Continent Petroleum Corp., Gulf Pipe Line Co., Gulf Refining Co. of Louisiana, Champlin Refining Co. and some others did not meet the prices until April 11.

The present disagreement on price policy represents several lines of thought. With the Sun Oil Co. and others the increases were posted to show Texas producers that the refiners were willing to co-operate in a movement that would bring production down without causing a hardship to the producers. It was an invitation to the producers to get into the game and play it out to the end until conditions warrant more production. The attitude the Humble Oil & Refining Co. takes is that it cannot see its way clear to paying higher prices until it is assured that the producers will do their part in the general forward movement. The Humble's attitude is both an invitation and a challenge to the producers. Humble tells them to put their house in order. The Texas Railroad Commission, has set a limit of 791,705 bbls. per day as the production of Texas. This is 96,000 bbls. a day less than the daily production in Texas last week. When East Texas has been cut to 335,000 bbls. per day and other flush pools in the state get down to the new allowables, then we may expect to see the purchasers in agreement as to prices.

The Standard Oil Co. of Indiana sets forth a number of conditions to be overcome before it can feel warranted in advancing crude prices. The Tidal Refining Co. takes the same attitude as the Standard of Indiana.

Federal Oil Conservation Board Gives Warning That the Industry Must Solve Its Problems

By CHARLES E. KERN
Washington Bureau, The Oil and Gas Journal

WASHINGTON, D. C., Oct. 19.—"The American oil industry gives indications of being the first basic industry to emerge from the world depression," the Federal Oil Conservation Board declares in its report to the President of the United States made public today.

Then follows a plea to the oil industry to continue its efforts to stabilize the oil industry with the production end of the industry accentuated.

"Correlation until made effective in the control of drilling must be effected in the production phase," the board says in its report to President Hoover.

"The permanency of the present improvement will therefore depend largely on whether the state co-operation manifested in the production compact of September, 1931, and in the creation of the Oil States Advisory Committee, is continued on a permanent basis through an interstate compact, or is relaxed as conditions improve.

"Unless satisfactory machinery for stabilizing the production branch is adopted, no improvement in refining and marketing practices will be wholly effective; but if constructive tendencies on the production side are made permanent, corresponding improvement of the other branches may be expected to follow.

"Certainly the oil industry, one major business with a comparatively intact market, never had a better opportunity to serve the country and the country never had a more vital interest in the purchasing power of this industry," declares the oil board in the final summing up of its fifth report to the President of the United States, signed by all of its members, Dr. Ray Lyman Wilbur, Secretary of the Interior, chairman; Patrick J. Hurley, Secretary of War; Charles Francis Adams, Secretary of the Navy, and Roy D. Chapin, Secretary of Commerce.

After declaring that the American oil industry gives indications of being the first basic industry to emerge from the world depression, the report continues in full text as follows:

Improvement in Prices

Crude oil prices at the end of the first half of 1932, although still at the border line of average production costs, were over twice the Mid-Continent levels of a year ago, and five times the 1931 lows. The total demand for crude oil has been sustained for the first half of 1932 above 89 per cent of that for the same 1929 period and above 94 per cent of the 1931 figures. Estimates of crude oil demand for the latter half of 1932 have ranged around 86 per cent of that for the same 1929 period, and about 93 per cent of that for 1931. Efforts are under way to stabilize domestic crude oil production at about 2,000,000 bbls. daily, which, if successful, will further strengthen the industry's condition. Total stocks have been slowly reduced, about 11 per cent in two years. Gas wasted into the air in California, the only State from which adequate records are available, has been running at about one-ninth of the 1931 rate.

The Supreme Court has sustained the validity of the California and Oklahoma conservation statutes, and the principal Texas statute has been sustained by state and lower Federal courts. The production from the East Texas Field, which at distress prices handicapped the industry in 1931, is under proration; so is the production of every other major area, although output generally has been somewhat above recommended levels. Imports are restricted.

The effects of the industry's rising purchasing power are beginning to be felt. They will be further manifested during the fall and winter if production can be kept on a stable basis, but continued stability will depend largely on the situation in the East Texas area.

Production, refining, marketing, reserves: These four phases of public concern, in the past two years, have each seen developments which will have an important bearing on the duration of the present upward trend. They are dealt with in the following paragraphs. The appendixes supply more detailed material.

1. Production: Supply and Demand

Most of the problems of balancing supply and demand rest in the "supply" side of the equation. Demand for products can be predicted with fair accuracy, as demonstrated by the forecasts made by this board's economic committees, which from time to time have been published for the industry's assistance.

It is convenient to classify supply in three groups: (A) New crude oil, (B) drafts on storage, and (C) sources other than crude oil (natural gasoline and benzol). As new crude oil usually furnishes over 90 per cent of this supply, its control is the prime factor. Speaking generally, it is convenient to divide crude oil sources into six groups: (1) Texas, (2) Oklahoma, (3) California, (4) Kansas, (5) all other states, and (6) imports. Any one of the three States of Texas, Oklahoma or California could alone supply all our crude requirements for a time; and Kansas, New Mexico, Arkansas and Louisiana together could do likewise. Imports alone could supply a large enough share to displace any one of these sources entirely for the time being.

Both the immediate potential supply of crude oil and the quantity recoverable over a period of years are dependent upon a factor which no state has found means to effectively control, and which stimulates production without direct relationship to the demand for oil—the system of offset drilling necessitated by the prevalent doctrines of ownership. An oil pool, being a physical unit, is subject to drainage by any surface owner regardless of the oil content of his acreage. In the absence of statute or agreement, the only recourse of a co-owner is to compete for capture by offset drilling. The state's authority to control this basic factor, drilling, is largely untested, except for some successful efforts to control spacing of wells. No state has endeavored to declare an oil pool to be a unit and to require the development of it as a unit for the common protection of all owners.

However, the authority of the state to regulate production, as distinguished from development, has been established on the grounds both of protection of the correlative rights of a field's common owners and of the state's interest in its natural resources. In the main, efforts of the state to effect stabilization have commenced with the production phase and have left the development phase relatively untouched.

Because the potential production, established by competitive drilling, is in excess of the demand for oil, the adjustment among the various sources must either depend on their comparative costs of production, or on enforced restrictions of production to enable allocations of outlet among old and new areas. The new flush fields are the low-cost units, and, therefore, if costs alone were to control, such fields would monopolize the market. Yet unrestricted production from such sources means the temporary or even permanent abandonment of the older wells of settled production, with attendant dislocation of investments. It also means lessened ultimate recovery from the flush fields themselves because of loss of the irreplaceable lifting power of the gas blown into the air, accelerated water encroachment, and other causes.

Ratable Apportionment

The problem of ratable apportionment of outlets has been encountered in three phases: Proration among wells in a single field, proration among fields in the same state, and proration among producing states. While the first two can be effected by an individual state, each of the states has been reluctant to adopt them and enforce restrictions on its own production, in the absence of assurance by its neighbors that the market thereby relinquished would not be absorbed by their unrestricted production. The fear of excessive importations has similarly discouraged local proration, although in 1931 imports were in fact reduced 25 per cent, partly at the suggestion of this board. They have since been restricted by legislation.

The vital third phase, proration among independent sources, has been the most difficult one to reduce to a working basis.

There has been increasing recognition that the states can solve the problem if they act together, and that an interstate agreement for co-ordination of production programs with joint estimates of demand, coupled with Federal control over imports, is an effective method. Governors of Oklahoma, Kansas and Texas entered into such an agreement in 1931, and a committee representing governors of 10 states, functioning as the Oil States Advisory Committee, has furthered the work of co-ordination. Bills are pending in Congress to authorize an interstate agreement to place this common-sense work on a permanent basis. The Federal Oil Conservation Board, which has from time to time suggested such a program, has asked its technical and advisory committee to bring together the current information on this effort; it will be found in Part 2 of the appendix.

Improved conditions during recent months may be attributed to the fact that for the time being production in all states has been more closely in accord with demand than in several years. The oil states, with the industry's support, have brought about this result by co-operating to see that the curtailment has been more nearly unanimous and on an equitable basis.

2. Refining

Excessive offset drilling builds up what has been called an "invisible inventory" of crude oil. This inventory, like the unliquidated surface stocks, is quickly convertible into gasoline. It exerts a pressure toward market, stimulates the building and operation of excess refinery capacity, and has a large share of responsibility for the consequent demoralization of markets.

There has been a continuing failure to reduce refinery operations to accord with market demands, owing in part to the pressure of distress crude oil seeking markets at any price, and in part to a competition for gallonage, prompted by surplus refining capacity, which has overshadowed competition for profits.

In the refining branch of the industry plans for improvement not dependent on stabilization of the crude oil supply have generally looked either to an exercise of authority by the state or to modification of the Federal antitrust laws.

No state has attempted to co-ordinate refinery operations with demand, nor to require maximum gasoline recovery, nor in any material way to affect the quantity of output. The state's power to effectively control refinery operations has been generally doubted, and attempts at its exercise will probably await a distinct change of thought within the industry itself.

Modification of the antitrust laws as they affect production of natural resources has been recommended[1], but revision sufficiently general to include refining activities is not in immediate prospect, and the question should be regarded as open to future decision. It is not certain that these laws are as great a deterrent to co-ordination of refinery runs as are competitive tendencies within the industry which would continue even if the way were open for complete agreement. There is room for greater co-ordination under existing statutes. As an example, some improvement in conditions was effected in 1931 through substitution of the equivalent of a six-day week for the usual seven-day operations, partly on this board's recommendation.

The production division of the industry is improving the correlation between the supply of crude oil and the demand for its products. The refining division must sooner or later reflect that improvement. It can hasten the process for both producers and refiners by striking a better balance between refinery runs and market demands than the midyear increases in gasoline stocks would indicate.

3. Marketing

The marketing branch of the oil industry, like the production and refining branches, can trace its basic difficulties to excessive offset drilling.

In addition it reflects directly the excessive operations of the refining division. As long as refiners are willing to sell gasoline on too wide margins, expand into new territory and attract new outlets by these margins, and then compete with other refiners to hold these outlets by further reductions, the present disproportionate distribution cost will continue. Distribution margins inside the city limits sometimes absorb as large a share of the consumer's dollar as that which the refineries receive for their gasoline, and out of which the producer must ultimately be paid for his crude oil.

It remains to be seen how broad an effect the present arrest of expansion of the gasoline market, and the necessary reduction in costs to increase the net return per gallon, will have on elimination of unnecessary outlets, crosshauls, and duplicated facilities.

Opportunities for assistance from outside the industry in the solution of marketing problems are not large. In two respects, however, the governments, Federal and state, have certain responsibilities.

1. Federal statutes, recognizing the validity of trace practice agreements when approved by the Federal Trade Commission, are being availed of to some extent.

Beneficial modifications of these stat-

[1]Report of the Secretary of the Interior to the Senate Judiciary Committee on S. 2626, 72d Cong., 1st session.

utes are pending, designed to lend greater encouragement and effect to such agreements when tending to promote fair trade and to discredit practices such as secret rebates, concessions, and "gasoline wars."

2. Evasion of gasoline taxes is a growing leak from state revenues and a source of margins for price cutting.

About 900,000,000 bbls. of all oils were consumed in 1931. State gasoline taxes netted over $560,000,000. This tax alone was thus equivalent to more than 60 cents per barrel of all crude oil consumed, including oil that did not go into gasoline. The average price which the producer received at the well for domestic crude oil in 1931 was but little more, about 65 cents.

This situation has put a premium on sales in violation of the taxing statutes. The quantity of such illegal sales is, of course, not measurable. Tax evasion depresses prices because the illegal seller of gasoline has a hidden margin of profit against the dealer who obeys the law, and can thereby undersell him; the weighted average net tax in 1931 was about 3½ cents per gallon. The tax evader in 1931 escaped a charge about equal to the cost at the well of the crude oil which furnished his gasoline.

The new and temporary Federal tax of 1 cent per gallon, although an additional burden on a highly taxed commodity, offers some compensation to the industry in the opportunity for Federal and state co-operation in eliminating the tax evader. The Federal Government of necessity must now inform itself of the movements of gasoline, and it should be feasible for such data to be collected and exchanged for the benefit of both the Federal and state governments through a central agency. Legislation now pending would authorize such work by the Bureau of Mines.

If an interstate compact for co-ordination of production becomes effective, the exchange of information as to gasoline movements should be an additional function of the interstate agency created.

Not until complete information on all refinery shipments, intrastate and interstate, is co-ordinated, will a basis be laid for eliminating the tax evader as a major factor in depressing markets and decreasing state revenues. If the damage from this illegal source continues to increase, the remedy may ultimately be statutory authority for collection by the Federal Government at the refineries of taxes for such consignee states as desire to join in such a program.

4. Reserves

In 1926 the extent of known domestic reserves was about 4,500,000,000 bbls. Reserves made known by later discoveries have raised the current classification of known reserves to 10,000,000,000 bbls.; future discoveries may raise it further; but the day of exhaustion is merely postponed a few months or a few years by each new discovery. Each year this country consumes or exports some 800,000,000 bbls. more than it imports. In other words, as has been said by one authority, the equivalent of from 8 to 10 new pools, each containing 100,000,000 bbls. recoverable oil, must be discovered each year to maintain our present margin of domestic reserves. The wheels of 80 per cent of all our horsepower, fixed and automotive, are turned by the consumption of a resource whose known reserves have never been many years ahead of exhaustion. Although we possess large quantities of substitutes in oil shale and coal, capable of distillation, new processes must be discovered before their refining costs become competitive with costs of producing motor fuel from crude oil.

The paradox of a present oversupply in the face of ultimate shortage was graphically illustrated in 1931 in East Texas. In Appendix 6 is a summary of this field's records. On the credit side is a reserve of about 2,000,000,000 bbls. On the debit side is a drilling program which gradually necessitated cutting the ratable daily outlet of each well to 46 bbls. at midyear against potentials as high as 20,000 bbls. daily, and during which, prior to such restraint, Mid-Continent 36° (A.P.I. gravity) crude oil prices dropped from 95 cents per barrel to 18 cents. East Texas was for many months the greatest potential asset and the greatest current liability of the oil industry. The behavior of this area during the autumn of 1932 and the succeeding winter will be a major factor in the industry's rise or recession.

The public domain has contributed but little to the demoralization from which the industry is emerging. The Federal Government on its own lands has been in a position to attack the problem at its source—the drill—and to effect a substantial curb on ill-advised operations. On March 13, 1929, the issuance of prospecting permits was stopped. No new public-lands field has duplicated the performance of East Texas. In three years more than 10,000 speculative paper permits, which encumbered the public domain without compliance with the law's development requirements, were eliminated; bona fide permits were extended on condition that drilling be deferred. The authority for the policy was sustained by the Supreme Court. Legislation authorizing unit operation was obtained from Congress. A fresh start has been made. On April 4, 1932, new regulations were promulgated under which prospecting permits are now issued, so conditioned that production in any new field on the public domain will be governed by a unit plan which will give all permittees on the structure, whether their holdings be large or small, a ratable share of the legitimate outlet, and will insure that wells will be drilled only as needed and on locations which will promote maximum recovery.

Example of Unitization

As an example of what unitization can accomplish through co-operative effort of operators, Kettleman Hills North Dome, 45 per cent public lands and 55 per cent private, in California, is producing under a voluntary unit operation agreement 60,000 bbls. of high grade oil per day against a daily potential of 250,000 bbls. —which could close down many of California's competing fields—and is substituting orderly development at minimum cost for the competitive drilling system which has handicapped East Texas.

The naval petroleum reserves and the naval oil shale reserves are held for the exclusive use and benefit of the Navy. The Government's policy is to conserve the oil in the ground in these reserves until national emergency may require its production and use. Naval Petroleum Reserve No. 2 in California is so checkerboarded by private holdings that its value as a reserve is greatly diminished. If a suitable oil field, which could be reserved as a unit, can be found on the public lands approximately equivalent to Reserve No. 2, consideration should be given to the possibility of setting it aside for use as a naval petroleum reserve.

Present peace time requirements of the armed forces of the United States are approximately 1 per cent of domestic production, and military requirements impose no strain on production quotas or price structure.

Current data on reserves, and on the particular effect of gas wastage on their ultimate recovery, have been brought together in Part 6 of the appendix.

Conclusion

The duration of the recent upward trend will depend on whether certain of the factors which have contributed to it are given enough permanency to be available for assistance if and when the cycle turns downward. Ordinarily the cycle begins with profitable prices; wells are drilled, the cost of which is supposed to be justified by the value of the recoverable oil; this new drilling discovers new sources, or accelerates the production from old ones by requiring offset drilling; the new flush portion of the supply can be produced profitably at prices less than cost of the settled pools, and such lower prices control the market; proration becomes necessary if any but the flush wells are to retain a share of the market; the triple shock of curtailment plus reduced value of the reserves plus the necessity of freezing capital in offset wells induces a decline of new drilling and of new production; prices slowly go up again; and at this point the lack of control over one factor generally starts a down cycle before the losses of the last dip have been made good. This uncontrolled factor is the need for correlation between the independent sources of supply—the several states and foreign importations. Stabilization in one state, with recession in the quantity of distress crude, has generally been followed by the onset of flush production in another. As curtailment has brought one state to the upswing, the improved market has been disturbed by excessive production from another. Correlation, until made effective in the control of drilling, must be effected in the production phase.

The permanency of the present improvement will therefore depend largely on whether the state co-operation manifested in the production compact of September, 1931, and in the creation of the Oil States Advisory Committee, is continued on a permanent basis through an interstate compact, or is relaxed as conditions improve. Unless satisfactory machinery for stabilizing the production branch is adopted, no improvement in refining and marketing practices will be wholly effective; but if constructive tendencies on the production side are made permanent, corresponding improvement in the other branches may be expected to follow.

Certainly the oil industry, one major

World Crude Oil Production for 1932 Estimated at 1,300,000,000 Barrels

By V. R. GARFIAS* and R. V. WHETSEL

Preliminary figures indicate that the world's production of petroleum in 1932 will total approximately 1,300,000,000 bbls., or about 69,000,000 less than in 1931. A decline of 61,000,000 bbls. in the production of the American field was chiefly responsible for the decrease of the world's output. The production of the Russian, Rumanian and Persian fields, which increased approximately 42,000,000 bbls. in 1931, will this year show an aggregate loss of about 11,000,000 bbls.

Among the outstanding developments during the year is the increasing co-operation in the United States in legislative matters having to do with oil conservation in the most important producing states. The voluntary proration of production by major companies has also been a big factor in bringing about a reduction in the output of the American fields of about 110,000,000 bbls. within the past two years notwithstanding the large available potential production. The unit plan for the operation of oil pools is being more and more accepted as its benefits are becoming fully realized.

The American tariff on imports of crude and refined products which went into effect on June 21 of this year has not thus far seriously influenced the production of the American fields nor the output of those countries exporting to the United States due largely to the unusually big imports made in anticipation of the tariff.

The petroleum conferences held during the year in New York and Paris are the first world-wide efforts to remedy conditions by controlling the main sources of supply. It is expected that substantial benefits will eventually result from these conferences.

It may be stated that during 1932 the oil industry has done much to put its house in order and that it is now in a position to take full benefit from the expected upturn of business.

United States

It is estimated that the United States will produce 789,000,000 bbls. of crude oil in 1932 or approximately 80,000,000 less than will be consumed. Imports of crude will exceed exports by about 14,000,000 bbls. indicating that about 66,000,000 bbls. of crude will be withdrawn from storage during the year. These figures show that the curtailment of production is more than keeping pace with declining consumption.

Russia

Because refining and transportation has lagged behind production the output of the Russian fields during 1932 will probably be less than that of the previous year. For the same causes considerable crude has been forced into storage during the past two years and this has necessitated the closing of many wells. Increasing domestic consumption is relieving the situation to some extent, but exports of crude and refined products will probably not be greater than in 1931.

*Foreign Department, Henry L. Doherty & Co.

Venezuela

It is estimated that the production of Venezuela will exceed the output of 1931 by about 4,000,000 bbls., such increase being partly due to increased production and exports before the American tariff went into effect in June.

Rumania

Early in 1931 all efforts to bring about a program of proration of production failed and the competitive development thus initiated has continued to date. Since the Paris Petroleum conference, however, the Rumanian producers have been attempting to arrive at a workable plan for reducing development and production. Some authorities are of the opinion that the existing Rumanian pools reached their peak in 1931 and that the probable decrease of about 2,000,000 bbls. this year marks the beginning of their actual decline.

Other Fields

The Persian fields followed the same course of steady development and production of previous years, the trend being about the same as in 1931. The fields of Dutch East Indies will probably produce slightly more this year than last but will not reach their peak figure of almost 42,000,000 bbls. obtained in 1930. Mexican production in 1932 may fall short of the 1931 output by less than 2,000,000 bbls. and the production of Colombia may equal that of the previous year.

The total output of the other producing countries has varied very little during the past three years and there is very little of importance worth noting in regard to their development during 1932.

The following table shows the world's crude production for 1930 and 1931 as given by the U. S. Bureau of Mines and a preliminary estimate of the output for the year of 1932 based on figures thus far available.

WORLD'S PRODUCTION OF PETROLEUM
(In thousands of barrels)

	1930	1931	1932
United States	898,011	850,275	789,000
Russian (incl. Sakhalin)	127,360	164,140	154,000
Venezuela	136,669	118,770	122,500
Rumania	41,624	47,600	45,000
Persia	45,828	44,300	44,800
Dutch E. Indies	41,729	35,500	37,000
Mexico	39,530	33,039	32,000
Colombia	20,346	18,237	18,000
Argentina	9,002	11,608	13,000
Trinidad	9,419	9,769	10,000
Peru	12,449	10,106	10,000
British India	8,292	8,190	8,200
Poland	4,904	4,340	4,000
Sarawak	4,907	3,689	2,300
Japan	1,950	1,990	2,000
Germany	1,182	1,643	1,800
Egypt	1,996	1,946	1,700
Ecuador	1,553	1,751	1,700
Canada	1,522	1,584	1,050
Iraq	913	900	900
France	523	517	500
Others	328	405	550
Total	1,410,037	1,370,299	1,300,000

business with a comparatively intact market, never had a beter opportunity to serve the country, and the country never had a more vital interest in the purchasing power of this industry.

(Signed):

RAY LYMAN WILBUR,
Secretary of the Interior, chairman.

PATRICK J. HURLEY,
Secretary of War.

CHARLES FRANCIS ADAMS,
Secretary of the Navy.

ROY D. CHAPIN,
Secretary of Commerce.

Washington, October, 1932.

Supplementary Information

Seven appendixes prepared for the board under the direction of the technical and advisory committee are attached to the report. These appendixes relate to Exploration and Development, the Balancing of Supply and Demand, Changing Aspects of Petroleum Refining, the Demand for Gasoline, the Need for Uniform Gasoline Tax Laws, the Conservation and the Diminishing Reserves of Oil and Gas, and the public domain and the mineral leasing acts. The four subjects, production, refining, marketing and reserves are fully discussed.

Under the head of "The Balancing of Supply and Demand," Appendix No. 2, is quite explicit in offering suggestions of ways of procedure, after pointing out problems that arise from our union of states that would not control under some other nation's laws. Here we have the barriers of the Federal and state antitrust laws. After discussing these difficulties the Technical and Advisory Committee says there exists, however, constitutional machinery for effecting the necessary balance, adding:

Correlating the Police Power

The problem is one of correlating the police power of from three to seven states and the authority of the United States over foreign and interstate commerce. Should the oil-producing states be authorized to collectively exercise their police power in trust for the nation, and be given some assurance that the general government will in return exercise its control over foreign importations and its power to negotiate with foreign governments, then the objective may be reached.

The board has previously suggested that an interstate compact could accomplish these purposes. Legislation is now pending to authorize negotiation of such a compact. There is suggested below an outline of possible objectives. Interstate compacts have heretofore been authorized by Congress, pursuant to the authorization of the Constitution, Article 1, Section 10, Clause 3, in 55 cases, involving 44 of the 48 states. Thirteen others have been entered into without express consent of Congress.

Objectives

In general, there are three requisites which a compact may adequately meet.

1. The initial requisite is an agency which can effectively forecast demand and allocate among producing states production quotas to supply it. Informal forecasts of such a character have heretofore been made by this board's volunteer committees on petroleum economics, at the request of the American Petroleum Institute. As such forecasts are necessarily lacking in authority, and as the Federal Government can give them none which the states need follow, any permanent fact-finding group should be an interstate agency coupled with Federal participation. It may be either one agency with both Federal and state representation, or the interstate group may be composed exclusively of state representatives and concurrence may be provided by some Federal body in such of its findings as, if given effect, would affect interstate and foreign commerce. Federal participation in one form or the other will insure protection of consumer and producer alike.

Such an agency could periodically forecast indicated demand for consumption in this country and for export, and estimate requirements for domestic crude oil production, drafts on stocks, and imports, in order to meet that demand. April 1 and October 1 are the most feasible dates for such forecasts because they represent respectively the usual high and low points of motor fuel stocks. Having made these findings, it could certify to the member states and to the United States the respecive state produtcion quotas.

2. The interstate body could perform certain additional functions, viz:

(a) Recommend adequate state conservation laws, uniform in principle;

(b) Interchange information as to refinery runs and shipments, in order to facilitate gasoline tax collections;

(c) Recommend specific agreements among producers and refiners to carry out its supply and demand forecasts, provided that concurrence be had by some Federal agency as to agreements affecting Federal and interstate commerce. Such concurrence, when given, should, under the provisions of the Federal statute authorizing or ratifying the compact, operate as a finding that the approved agreement is not in contravention of the antitrust laws. As the duration of such an agreement would be limited to the six-month period embodied in the forecast, there would be recurrent opportunities for Federal termination by failing to renew approval.

(d) Co-operation with Federal agencies in negotiating agreements with foreign producers or producing nations. Oil once produced will find a market. If international markets are to be fairly allocated, and our foreign markets protected, the allocation requires reciprocal agreements on international production quotas. Under our constitutional system the consummation of such agreements is a Federal prerogative but the enforcement of them is the state's, whose police power is essential to such enforcement. An interstate compact would enable the states, through their interstate body, to assist the Federal representatives in negotiating agreements which the compacting states could enforce as their municipal laws.

Keeping foreign oil out of a distressed domestic market is less than half the problem which foreign overproduction can present. America's share of the world's gasoline export market has been pushed back from a maximum of 70 per cent to last year's minimum of 38 per cent. Quantitatively in 1931 our loss of export markets created a shock to our domestic structure half again as great as all gasoline imports. Further exclusion of imports, to be effective, must be accompanied by effective agreements for restriction of production at the source of these imports, or by far-reaching European trade readjustments, if exclusion here is not to be followed by their displacing our exports and working the same damage in translated form.

Provisions for Enforcement

3. Provision should be made for enforcing the production quotas which the fact-finding agency recommends and certifies. Such quotas would be of two classes—domestic production and importations. The following methods may be considered:

(a) As to domestic production: The compact may, if the states desire it, obligate each to make its quota effective; but each state must necessarily be free to do so by such legal machinery as it sees fit, and solely under its municipal law. The recommendation of uniform laws forthcoming from the interstate body from time to time may be expected to gradually induce closer uniformity in conservation methods.

(b) As to imports: Regulation can be accomplished only by Federal agencies. The compact itself can not, therefore, be expected to provide for enforcement of any import quota, although it should, as above suggested, provide for co-operation by the interstate body in its determination. Assuming that a scientific forecast has been made of the quantity needed there are two general methods of restricting imports to that figure—a flexible tariff and proration. The Federal statute which authorizes the compact or ratifies it should, therefore, implement the compact by one method or the other. Each has certain advantages.

A flexible tariff, if adopted, should have as its objectives the fixing of tariffs which will equalize the cost of imported oil and oil products at consuming centers with the reasonable cost of similar American products; drawback provisions to encourage importations for refining and re-export; and provisions preserving for American ports the bunkering trade for foreign commerce. It could be made to vary upward or downward in the same proportion that imports exceed some fixed quantity, or the Tariff Commission could be empowered to fix the rate periodically. H. R. 10,862 (72d Cong. 1st Sess.), adopts the latter method. Or a set tariff may be fixed, and the Tariff Commission be given authority to flex the rate. Such is the method proposed by S. 3 (72d Cong. 1st Sess.), read in conjunction with the 1930 tariff act.

Proration, or partial embargo, is an alternative method. It does not have the advantage of insuring against destructively low prices, but does insure a definite limit on quantities. Under this method the Federal statute which authorizes or ratifies the compact may set imports at some fixed percentage of the periodical estimate of demand certified by the fact-finding body created under the compact, and authorize some Federal administrative officer to issue certificates equitably to prospective importers, permitting importations in accordance with the quota set. In this event also, exceptions should be made in favor of oil imported to be refined and re-exported or furnished bunkers. This method is proposed in H. R. 12,076, (72d Cong., 1st Sess.). An alternative method would be to limit imports to some fixed percentage of exports.

The foregoing is an outline of the results attainable collectively by an interstate compact and by the Federal statute which authorizes or ratifies it and supplements it by controlling importations.

Procedure

There are several sorts of procedure for effecting such a compact.

1. Congress may in advance enact a law authorizing a compact for certain stated purposes, including, if the above objectives are considered proper, uniform conservation laws, a joint fact-finding agency, and for individual enforcement of this agency's recommendations by the states, plus an independent provision controlling imports in one of the ways suggested above. H. R. 12,076, now pending, is of this general type.

In view of the opportunity for immediate action, Congress might justifiably authorize the compact to become immediately effective, subject to disaffirmance by Congress, rather than direct that its effective date be postponed until ratification by Congress.

2. The states, without waiting for such advance authorization, may proceed to negotiate their compact, subject to later ratification by Congress. There are two general methods:

(a) The states may authorize representatives to meet, negotiate, and sign a compact and report it back for ratification by their legislatures (if they do not direct that it become effective prior to ratification, subject to later disaffirmance). Such a compact was in fact informally effected in September, 1931, by an agreement between the governors of Kansas, Oklahoma and Texas, and was effective in meeting an emergency.

(b) Instead of signing a compact through their representatives, the states may enact reciprocal legislation, presumably after conference. Such legislation, for instance, may provide that the act shall become effective when certain other states have enacted similar legislation and have appointed members to serve on the interstate body.

Summary

This concludes a summary of a method by which the various controlling agencies may be co-ordinated to produce an effect comparable to that obtainable by a competing foreign nation in which there is no dual sovereignity, no subdivision of ownership of oil pools, no capture doctrine, and no bar to co-operative agreements. The method suggested is that of co-operative action by the two sets of American sovereignties in the exercise of the police power by the one and the power over interstate and foreign commerce by the other. On the assumption that a better balance of supply and demand is needed to promote conservation and stabilization, it attempts to achieve that balance by co-ordinating powers now exercised independently, not by the creation of new restrictions on the oil industry or the unqualified removal of present restrictions. This country's legislation has proceeded on a policy of prohibiting monopolies, but has rejected control of the oil industry as a public utility. The middle ground, which is exercise of the police power to prevent waste, can not be occupied by the Federal Government because it possesses no such power, nor by any state alone because its power stops at its borders. The Constitution authorizes interstate compacts as a method for co-ordinating the necessary forces in such a case, and the oil industry presents an opportunity for exercise of that method with particular effectiveness.

Uniform Gasoline Tax Laws

The need for uniform gasoline tax laws is of particular interest, as treated by the Technical and Advisory Committee, with reference to the high rate of the tax in proportion to the selling price of gasoline, the extent to which the tax has been evaded and the division of revenue from gasoline taxes to uses other than for the benefit of motor vehicles.

"A properly written uniform gasoline tax law, thoroughly enforced, will do much to abate present conditions which are contrary to the best interests of the industry, the public and the state, and which in some areas are becoming almost intolerable," the Technical and Advisory Committee states.

Natural Gas Waste

Reference is made to natural gas waste and the efforts of the Department of the Interior to have such gas utilized by promoting its use in towns of the West with the result that the production and sale of natural gas from public lands has increased from 18,922,026,000 feet in 1928 to 41,962,184,000 feet in 1931.

Texas Legislative Inquiry Holds Hearings at Kilgore

KILGORE, Tex., Oct. 17.—Behind closed doors at military headquarters, members of a committee appointed by the Texas House of Representatives to investigate charges of illegal oil production in Texas fields questioned witnesses for two days.

While the committee refused to disclose the names of the persons who testified at the secret sessions, it was learned they were, for the most part, employes of the Texas Railroad Commission, state agency for the enforcement of conservation and proration statutes. A few royalty owners also testified.

R. J. Long of Wichita Falls, chairman of the committee, thought more information could be obtained if the identity of witnesses was not made public.

After adjournment of the two-day hearings, subject to call of the chairman, R. M. Wagstaff, of Abilene, committee member, said "a number of good leads" had been obtained and would be followed closely by the committee.

Long also forecast important developments as a result of the hearings. "We'll uncover something big before we get through," he said. He declined to intimate what that "something" was.

The committee will meet again in two or three weeks, Wagstaff said, at a place to be decided later. A full report will be made to the next session of the legislature in January.

The committee was empowered by the House of Representatives at the last session of the legislature to investigate production conditions in all fields of Texas to point a way for new legislation, if any is found advisable.

Manufacture and Uses for Asphalt and Cut-Backs in the Repair and Maintenance of Roads

By R. W. LESLIE and BURRILL ENNIS
Skelly Oil Co.*

The present popularity of the oiled or bituminous road has caused many of us in this section of the United States to look upon it as a new development in highway construction, whereas those of you who are old hands at the business will recognize it as merely a revival of methods which were used many years ago.

The first petroleum asphalt was merely the residue from distillation of crude petroleum. The character of the product from this simple treatment depended for its properties upon the natural qualities of the crude from which it was taken because almost no chemical change takes place when the distillation is properly carried out. Unfortunately, therefore, the wax and oily constituents of paraffin and mixed base crude appeared in the residue, giving it a greasy, dull, nonhomogeneous texture. These constituents are noncohesive in character, and they impart this property to the entire residue even though present in amounts less than 10 per cent. It was soon found impossible, with the means then available, to produce suitable asphalt from anything but a naturally asphaltic crude.

Old and New Methods

The early manufacturing process was carried out in simple cylindrical stills where heat was applied until the lighter fractions were driven off. The residue from this operation was then transferred to another still where it was kept at a temperature of 500° to 600° F. while steam or air introduced through a perforated pipe was blown through it until the oil reached the desired degree of hardness. This residue which we call asphalt could then be run into containers for shipment or to steam heated storage. Much asphalt is still being manufactured in this manner, but, as the art of refining crude oil advanced, so did the methods of producing asphalt. The first definite step forward was the invention of the pipe still which made it possible to conduct distillation operations without subjecting the oil to long destructive periods under high temperatures while later a still better separation of volatile oil from asphalt was accomplished and a more uniform product obtained through the use of the fractionating tower. In recent years, by means of vacuum pipe stills, the distillation is being conducted at greatly reduced temperatures. All of these improvements aided in the production of better asphalts, but the process was still essentially one of distillation in which the properties were determined by the crude oil.

In modern refineries, naturally asphaltic crude is refined to asphalt with the aid of all these improvements by a simple distillatory method, but it remained for the modern cracking process, which is also carried out in a pipe still where temperatures can be carefully controlled, to introduce a new element into the picture. The damage from overheating, which earlier asphalts had suffered, was the result of excessive periods of time under heat rather than particularly high temperatures. The crude refining equipment then in use contained large volumes of oil, and distillation was a matter of hours rather than minutes or seconds as is the case today. During all this time, slight decomposition was taking place, until the cumulative effect was such as to seriously affect the product. Experimental work with cracking stills developed the fact that petroleum residues could be subjected to high temperatures for short periods of time with very beneficial effects upon their characteristics and without undesirable decomposition. The wax and oily constituents were largely removed by this treatment, leaving the original asphaltic bodies relatively unchanged. It was also found that one of the by-products of the cracking reaction, the heavy polymers which form whenever distilled oil is decomposed by means of heat, produced further desirable properties when blended with the asphalts naturally occurring in the crude. By closely controlling both the reaction in the cracking still to produce the proper polymerized material and the heat treatment given the natural crude residue, a raw material is provided from which asphalts of any desired character may be produced. Crude from any source may be employed by changing only the time and temperature conditions in the pipe still to suit the material handled.

The crude is usually first distilled to remove the lighter fractions and the residue is sent to the cracking still for its dewaxing heat treatment. The asphalt blends with the resulting natural asphalt within the confines of the cracking still in various ways, depending upon the type of process used, but the combination takes place always at high temperatures while the oil is very fluid so that a perfectly homogenous mixture results. In order to facilitate the handling of the blended asphalt, it is usually withdrawn from the still, mixed with lighter fluxing oil derived from the cracking process, and is then sent to some other apparatus for adjusting its consistency to the desired product. The process is continuous in that the raw material is fed into the apparatus in a steady stream and the product withdrawn likewise as it is formed. So many different forms and combinations of apparatus are successfully used to accomplish the above that a discussion of details is outside the scope of this paper. However, the general description will suffice to show the major steps.

Finished Products

Owing to the many different types of bituminous road construction which have been developed to successfully cope with all kinds of local conditions such as aggregate, climate, soil, etc., a great many forms of asphalt have been placed on the market. The handling of the intermediate raw material from the cracking still will depend, of course, upon the product to be manufactured. If the commonly used slow curing road oil is to be made, one of the distillates from some other refinery operation is mixed with the fluxed asphalt until the consistency reaches specification. If a straight so-called penetration asphalt is desired, vacuum stills may be employed to evaporate the fluxing oil while the mixture is still hot from the cracking still. Steam may be added at this point to aid in vaporizing whatever volatile oil is left and also to improve the properties of the asphalt. It is the regulating of the amount of steam and vacuum which determines the hardness of the asphalt.

For many purposes the asphalt is shipped and used in this condition, but in late years a demand for a more easily handled form of asphalt has been growing. In response to this demand, a class of products known as cut-back asphalts has been developed for which a wide field of usefulness is indicated. Cut-backs, as the name implies, are made by "cutting" or blending the natural or manufactured paving asphalt with a lighter hydrocarbon oil to make a fluid mixture. The blending is done most conveniently in the pipe through which the asphalt continuously passes from the still to the storage tank. Measured quantities of solvent are pumped at a constant rate of speed into this line, where a thorough mixing takes place with the aid of the heat contained in the oil. In order to prevent evaporation of the solvent after the release of the blend into the storage tank, a cooler is usually placed after the point of mix to condense any vapor which may have been formed. The solvent can be varied in character all the way from heavy gasoline to high boiling distillates, depending upon whether fast or slow curing is desired. When the more volatile gasoline is used as a solvent, evaporation takes place so rapidly that the asphalt sets within a few hours after application and leaves the road surface in its permanent condition, whereas the furnace oil cut-back needs an extended period of time to develop its ultimate set. Any rate of cure intermediate between these two extremes may be secured by varying the volatility of the solvent; however, the kind of pavement which ultimately results, whether it be hard or soft, is determined by the penetration test of the asphalt used as a base rather than upon the type of solvent used. Cut backs are now manufactured from all grades of asphalt and in all degrees of volatility.

Advantages of Cut-Backs

Whenever paving asphalt is applied in the fluid state, the disadvantages of its use are obvious. The material must be first heated to a temperature of 300° to 400° F. where it must therefore be maintained between narrow limits until applied to the road. If it is allowed to become too hot, it suffers irreparable injury to its utility as a binding material. Great care must be taken, on the other hand, to avoid trouble from the asphalt solidifying in the small passages of the apparatus. Removing the solid asphalt from the containers in which it is shipped is a laborious task. All of this is particularly true where smaller quantities are to be worked into pavement.

In an effort to find a more satisfactory way of handling this useful road binder, the producers and state highway departments have co-operated in extensive experimental work over the past few years. They have established the fact that in every case where paving asphalt had been applied to the road as a fluid, a cut-back of similar base could be substituted with even more beneficial results so far as the road is concerned, to say nothing of its ease of application. Cut-back asphalt, being fluid, may be pumped through all the necessary operations from the original container to its place on the road. Heating in this case is neither necessary nor desirable, and the apparatus is therefore greatly simplified.

The use of cut-backs has a particular advantage in the construction of roads because their behavior can be predicted with much greater accuracy than that of residual oils. The rate of cure is definite, and the hardness of the resulting asphalt binder is definite because specifications based on the distillation test can be written which control these properties to a very close degree. This fact is not true of residual road oils and may account for some of the variable results that have been observed in the behavior of different residual oils, all of which had met the same specifications. Many of you, no doubt, have observed that some will dry out rapidly to a pitch-like consistency while others will remain soft and oily long after application. Such variations are not experienced when using cut-backs.

Types of Road Construction

The bituminous macadam highway is the best known variety of the more permanent asphalt roads. Many thousands of miles of bituminous macadam are now in service in the East where they are giving low cost performance in spite of their relatively high initial cost. The construction is similar to ordinary macadam in that a crushed stone of uniform size is used, but the binder consists of some form of asphalt. A coarse aggregate of from 1½ to 3-inch crushed hard rock is laid to a depth of not more than 4 inches on a thoroughly leveled, swept and compacted foundation. Hot paving asphalt of a grade suitable to the climate is then sprayed on the layer in a quantity just sufficient to completely coat the aggregate. The mixture is then rolled with a 10-ton roller until compacted to the point where movement of the surface no longer take place. If a second layer of coarse aggregate is to be used, the process is repeated, using slightly smaller stone. The final surface is treated to a coat of 1-inch or smaller stone to fill the surface voids before applying a final or seal coat of asphalt, after which the excess binder is blotted up with one-quarter to one-half inch stone and rolled until thoroughly bonded.

Formerly only hot penetration asphalt was applied to the crushed stone in this construction, but cut-back asphalt is now successfully used although the layers of stone should be somewhat thinner for efficient treatment. The surface is permitted to set long enough after applying the oil and before starting compaction to permit the cut-back to partially set up or become "tacky." Consolidation may be partially accomplished by traffic, but it is best to roll lightly before traffic is admitted to the road and for several days thereafter. Some authorities advise delaying the seal coat until some weeks or months have elapsed to allow time for imperfections to show up. In this case it consists of about one-quarter gallon per square yard of quick-drying cut-back and cover coat of small stone chips.

The state of Connecticut has some experimental bituminous macadam roads in service today carrying 3,000 to 4,000 vehicles a day. They were built 20 years ago at a cost of only 65 cents a square yard, and now maintenance costs only about 1 to 1½ cents per square yard yer year. The low initial cost plus the low maintenance and long life of these roads have combined to make them one of the most economical surfaces we have.

Retreading Old Roads

A type of resurfacing construction has been developed in Indiana known as the bituminous "retreat" which is very similar to the bituminous macadam. It is applied to old brick, stone, macadam, or other hard types of pavement whose surfaces have become rough and objectionable because of disintegration, and which face destruction by reason of their inherent roughness. These worn-out roadways represent a considerable investment of public funds which should be conserved wherever possible. Through long use, the roadbed has usually become thoroughly consolidated so that it represents an ideal condition for a subgrade under a new surface which is most conveniently constructed of asphalt. At the same time it is very often desirable to widen these highways which were built for traffic

(Continued on Page 30)

*Read before Road Oil Congress in Tulsa, October 13 and 14.

Oil Industry's Case for Conservation Is Presented Before American Bar Association Meeting

By W. P. Z. GERMAN
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The Oklahoma Oil Conservation Statute, which was adopted in 1915, the constitutional validity of which was sustained in 1931 by a three-judge Federal Court (51 Fed. 21823) and, on appeal, in May, 1932, by the Supreme Court of the United States in the case of Champlin Refining Co. vs. Corporation Commission of Oklahoma, U. S., has a twofold purpose. One is to prevent every known type of waste of oil in connection with and incident to its production from the ground. The other is to protect the coequal and correlative rights of the landowners in the pool to reduce the underlying oil to possession upon the surface when and where it becomes the separate personal property of him through whose wells it has been produced. The Supreme Court of Oklahoma had previously sustained the validity of this statute in the case of Julian Oil & Refining Co. vs. Capshaw and others, 145 Okla. 237, 292 Pac. 841, decided October 28, 1930.

The great Oklahoma City Pool involved in the Champlin case, was discovered in December, 1928, by the drilling of a wildcat well over 6,000 feet deep. Already there were more than 500,000,000 bbls. of oil in storage in the United States, and purchasers were taking about 2,800,000 bbls. per day of new production. Already more oil was available from wells in the Seminole Pool in Oklahoma and other pools in the United States than the market could possibly absorb, and many of those pools were under proration. No one knows, as no one ever can know till test wells are drilled, where oil may be found, nor, when found how large the pool may ultimately prove to be; and in this respect the oil-producing business is not unlike other mining industries, but there the analogy ceases. This new pool, as is true of every new pool, was the secene of rapid additional drilling. Other landowners in the vicinity proceeded to test their tracts because, if the pool lay also under their lands, they had as perfect a right to enjoy the oil value due thereto as did the driller of the initial well, and, moreover, if perchance the pool lay also within the lands of any of them and they failed to ascertain the fact and exercise their respective rights to reduce what they could to possession on the surface above, those who did tap the reservoir would take and own most of the recoverable oil lying within the lands of all owners. The wells here were of unusually large daily potential capacities, many of them in excess of 50,000 bbls. each.

Puts Premium on Avarice

Oil sealed in porous rock in the ground is migratory and fugacious when its natural state is disturbed by the drilling and operation of wells. A landowner is said to own everything in his tract from the surface to the center of the earth; but, for over 50 years since oil was first discovered in America, the state courts have held that a landowner, by virtue of his title to the land, has the right to extract through his own wells every barrel of oil he can no matter from where in the invisible reservoir beneath he may perchance cause it to move to the bottom of his wells where he can capture it. He has title to all he captures and reduces to possession on the surface. This migratory nature of oil presents another peculiar feature of the oil-producing business; and the rule as to the right of capture places a premium upon avarice. The competition which ensues is not competition in trade and commerce but rather to capture all possible of the mass upon which all are making drafts. The result is that the moment a pool is discovered, the struggle to determine its territorial expanse and physically to possess as much as is possible begins. The intensity of the battle is hardly describable in words. Each and every owner resolves that none of his share shall be appropriated by anyone else if he can prevent it. The danger of loss to others by drainage is never present in nonliquid and nongaseous mineral mining, such as for coal, iron, silver, lead, zinc or gold.

Peculiarity of Oil Production

Another peculiarity of oil production is the fact that there is present in every oil-containing formation a force or energy called "reservoir energy" which is of inestimable value, when properly harnessed and utilized, in recovering the accumulated oil. Always with the oil lying far below the surface there is gas, both held tightly in the pores of the rock by an impervious shale covering, pressed down by all the weight of the material above. Almost always water lies beneath, or around the outer edges of, the rock containing the combined oil and gas and in immediate contact with them, and it will rush into the vacated pores as the oil and gas are drawn out. Invariably a heavy pressure is found to be present, and this accounts for the natural flow of the wells during the earlier life of the pool. Unless this energy is efficiently used large percentages of oil, otherwise recoverable, will be left in the ground to be later had only, if at all, by very expensive operations, oftentimes prohibitive. This energy may be dissipated through a few wells excessively operated, and when that is done, the ability of all other owners to make recovery is greatly lessened.

In the absence of voluntary or enforced orderly development and operation, the greed and avariciousness of those first to drill result in inestimable underground waste of oil and injury to other owners. Furthermore, drilling and producing activities, if uncontrolled, pay no heed to market conditions. An owner must bring what oil he can to the surface to form a part of the so-called stocks on hand, or he must see others in the pool appropriate his share of it through their wells. He has no other alternative. Even if already the buyers of oil are fully satisfying their requirements, still production proceeds. It is a battle of self-destruction although in the form of a battle for self-protection.

Right of Capture

There is but one answer to the problem which these conditions present, and it is that the best place for excess stocks is in the ground, where nature deposited them, to be drawn upon as and when needed, and to gain such a result the so-called vested unrestricted right of capture must be eliminated.

If, in the earlier days, the state courts had properly appreciated these facts, it seems reasonable that they would have refused to take the view that the right of capture was possessed by proprietors of land in oil pools, and instead, they would have applied the common-law maxim, applied in hard mineral mining, that no man may so use his own property as unreasonably to injure his neighbors. But, they early took the other view, and now the right of capture is a part of our law, probably to remain unchanged except by police regulations enacted by legislatures.

The first court ever to make a clear announcement of the legislative power of regulation was the Supreme Court of the United States, speaking through the late Chief Justice White, when in 1900 in Ohio Oil Co. vs. Indiana, there was involved the constitutional vaildity of an Indiana statute which forbade any owner to allow oil or gas coming from his wells to escape unconfined on the surface. Therein the court said:

"On the other hand, as to gas and oil the surface proprietors within the gas field all have the right to reduce to possession the gas and oil beneath. They could not be absolutely deprived of this right which belongs to them without a taking of private property. But there is a coequal right in them all to take from a common source of supply the two substances which in the nature of things are united, though separate. It follows from the essence of their right and from the situation of the things as to which it can be exerted, that the use by one of his power to seek to convert a part of the common fund to actual possession may result in an undue proportion being attributed to one of the possessors of the right to the detriment of the others, or by waste by one or more to the annihilation of the rights of the remainder. Hence it as that the legislative power, from the peculiar nature of the right and the objects upon which it is to be exerted, can be manifested for the purpose of protecting all the collective owners, by securing a just distribution, to arise from the enjoyment by them of their privilege to reduce to possession, and reach the like end by preventing waste."

Origin of Oklahoma Statute

Fifteen years later, in 1915, an intolerable condition developed in two large flush oil pools in Oklahoma. There were many producers, but only a few oil buyers. These buyers owned refineries, storage tanks and pipe lines, and also owned small but fertile tracts of land in these pools. They were able to satisfy their requirements and desires for oil by operating their own wells to capacity, and they purchased from but a few others. A large number of other companies and individuals, without pipe lines, storage tanks or refineries, and many of them with very limited means, owned the other wells in these fields. The buyers would not take their oil but chose to sap the underlying strata through their own wells. Some of the producers stored oil. At one time 10,000,000 bbls. were stored in expensive steel tanks to be held an indefinite period of time to await a market, and, meanwhile, bankruptcy faced many of those who had thus attempted to avoid what is now called "legalized piracy" by the specially equipped. Many of them could do no better than build earthen dams across ravines or creeks to take care of their production. Hundreds of thousands of barrels seeped into the ground or were flooded away down the streams to be lost forever. The more volatile and valuable constituent elements evaporated. The waste which took place was indescribably shocking.

The helpless producers saw but one remedy, and that was the limitation of production in these pools to the market demand for oil therein and a requirement for ratable taking by all well owners. The sustained Indiana statute went no further than to prohibit surface waste, but they read what Chief Justice White had said and procured the legislature to enact the present Oklahoma Oil Conservation Statute, prohibiting waste of every kind, requiring a limitation of production to market demand in each common source of supply where to produce more than that amount would result in waste, and limiting the right of each well owner to take only his share of the total amount which could be produced without waste, and making it the duty of the corporation commission of that State to enforce the statute by appropriate rules, regulations and orders. Certain penalties were imposed for violation of the act; unfortunately, not also for violations of the rules and regulations of the commission, save the power of the commission to punish as for contempt by the imposition of fines.

This law was enforced without serious resistance until the then existing pools declined to the point where the buyers of oil voluntarily took the production of all the wells.

Legislative Restriction

Some years later the era of propsperity which prevailed throughout the country ending in October, 1929, brought on extensive wildcat drilling for oil which opened up a large number of these hidden reservoirs, particularly in Oklahoma, California and Texas, so that by 1927 this Oklahoma statute was again invoked and statutes prohibiting waste were enforced in Texas and California. None of these statutes were alike in detail or plan, save that in all of them physical wastes were forbidden and administrative agencies had the power of enforcement. In all three of these states most of the major buyers were submissive to the legislative will, some actively supporting it and others passively yielding to it.

But, some smaller producers who also owned pipe lines and refineries made vigorous attacks in the courts upon the statutes. They filed suits in 1930. They deemed their right of capture to be vested and sacred, to belong to them by virtue of their title to the land where they had drilled their wells, and asserted that a legislative act which placed any restriction upon them other than against mere surface waste (a thing true of the Indiana statute), deprived them of their property without due process of law. They also asserted that the effect of proration was to deny them that liberty of contract guaranteed by the Fourteenth Amendment. They also deemed proration as price-fixing and price-controlling, and asserted its establishment was designed to maintain high prices.

Champlin Case

By June, 1931, when the Champlin case was tried, that company owned 9 of the 800 prolific wells in the Oklahoma City Field. Therein there were 53 lessees, each possessing one or more of 339 separate tracts in the pool on which the 800 wells were drilled. There were a dozen buyers of oil, each of whom, save one, owned leases therein. Champlin company had for many years owned and operated a 15,000-bbl. refinery about 80 miles away, and upon completing its first well in this field it constructed a pipe line of 18,000-bbl. daily capacity connecting its well and its refinery, and by the time of the trial its remaining eight wells were so connected. But, to produce more than its allowable under the proration orders would give it an undue proportionate part of the reservoir content; also, this would result in an excessive use of reservoir energy and thus cause under-

*Before American Bar Association, Washington, D. C. October, 1932.

Oxygen (in the air) is the trickster that may steal anti-knock value from your gasoline and turn it into gum

This trick costs you good money But with the new Universal inhibitor, you can stop it before it starts

Put a gallon (or less) of this inhibitor in a 100-barrel tank of your gasoline and it paralyzes the oxygen Then you can store the gasoline for months without losing octane number—and without forming gum

Dubbs licensees can buy the inhibitor at a special low price

Other refiners, of course, pay more but it still costs less than other methods—and does a better job

The sooner you prove its effectiveness in your own gasoline the sooner your gum troubles are over

Universal Oil Products Co
Chicago Illinois

Dubbs Cracking Process
Owner and Licensor

ground waste to the injury of other well owners and the public. Under proration said company would receive its fair proportionate part of the recoverable oil.

The trial court and, on appeal, the Supreme Court — the latter by unanimous decision—denied all of these contentions and sustained the statute and orders of the commission as constitutionally valid (except that both courts struck down the penalty provision of the act, not because penalties could not be vaildly imposed, but because these provisions were for violations of the act and not also the regulations, and the act was in and of itself so vague and uncertain that any penalty for its violation constituted a denial of due process of law). The trial court expressly found that the primary and paramount purpose of the law and proration orders was to prevent waste and protect correlative rights, and that the limitation of production to reasonable market demand was a reasonable way to gain those ends, and that whatever effect, if any, this had on the price of oil was incidental. This finding was sustained by the Supreme Court.

Effect of Uncontrolled Production

Some appear to find it difficult to dissociate proration and price control. But, they fail to realize that it is far more difficult, in fact that it is absolutely impossible, to disassociate unregulated production and disproportionate withdrawals out of the common fund; and they fail to realize that it is impossible to disassociate unregulated production on the one hand and waste and injury to property rights on the other. Usually the antiprorationist either owns a refinery capable of processing more than his permitted production or he has a contract to sell more than that amount. He attempts to conceal or honestly fails to realize that he has a motive to extract more than his neighbors will be able to do, and he charges prorationists with the selfish motive of attempting to maintain high prices, and he denies the sincerity of their stated desire for fair play among producers in reducing the reservoir content to possession, and in avoiding a diminution of the ultimate recovery. His contention is wholly without merit. In point of fact, is not uncontrolled production also price fixing and price controlling? An incidental effect of it is to deflate prices, often far below cost of production, and to destroy property values. It gluts the market with unwanted oil, much of which, according to the present-day conception, is, in the parlance of the industry, "stolen oil," for it is drained from the lands of others entitled to take it.

But, the effect of uncontrolled production to destroy prices or of proration to stabilize prices is purely an incident to an entirely different purpose. Primarily and avowedly proration is a protector of property rights, and is made necessary by the fact that uncontrolled production is destructive of property rights. There is described above what occurs when there is no regulation, how disproportionate takings occur, how greed plays its part, how the less favorably equipped will not sit supinely by, and how they attempt—though in large measure futilely—to protect their properties from drainage, and how most flagrant waste, both underground and on the surface, takes place. Also, the rights of the parties, coequal and correlative, have been stated. If a fair distribution is to be had only by regulated and orderly production, then it is begging the question for the specially equipped producer to say to the prorationist, "Your motive is to control prices." He does not add, "You should let me take your oil rather than commit so grave an offense as that."

Protects Property Rights

Everyone knows that proration was made necessary and was established to protect property rights from destruction, and it seems to the writer that he who refuses to accept this view closes his ears to the facts of the case. Chief Justice White, in his opinion in the Ohio Oil Co. case, well said:

"Viewed, then, as a statute to protect or to prevent the waste of the common property of the surface owners, the law of the State of Indiana which is here attacked because it is asserted that it devested private property without due compensation, in substance, is a statute protecting private property and preventing it from being taken by one of the common owners without regard to the enjoyment of the others."

Again he said:

"If on the other hand, there be, as a consequence of the right of the surface owners to reduce to possession, a right of property in them in and to the substances contained in the common reservoir of supply, then, as a necessary result of the right of property, its invisible quality, and the peculiar position of the thing to which it relates, there must arise the legislative power to protect the right of property from destruction."

Unreasonable Depletion

Justice Butler, in his able opinion in the Champlin case, speaking for the court, stated the governing principle when he said:

"In Oklahoma, as generally elsewhere, landowners do not have absolute title to the gas and oil that may permeate below the surface. These minerals, differing from solids in place such as coal and iron, are fugacious and of uncertain movement within the limits of the pool. Every person has the right to drill wells on his own land and take from the pools below all the gas and oil that he may be able to reduce to possession including that coming from land belonging to others, but the right to take and thus acquire ownership is subject to the reasonable exertion of the power of the State to prevent unnecessary loss, destruction or waste. And that power extends to the taker's unreasonable and wasteful depletion of a common supply of gas and oil to the injury of others entitled to resort to and take from the same pool. (Citing cases.)

"It is not shown that the rule for proration prescribed in Section 4 or any other provision here involved amounts to or authorizes arbitrary interference with private business or plaintiff's property rights or that such statutory rule is not reasonably calculated to prevent the wastes specified in Section 3."

The Champlin company had an established extensive marketing business reaching into many states, where it transported and sold the gasoline and other products of its refinery located in Oklahoma. It contended that the restrictions imposed by this statute upon its right to freely operate its oil wells, refine its production and transport the finished products to other states imposed a forbidden burden upon interstate commerce. This contention was denied by the court upon a holding that oil production is essentially a mining operation and not a part of interstate commerce, even though the product obtained is intended to be and is immediately shipped in such commerce; that hence the regulation of its production for the purposes stated does not impinge upon the commerce clause.

Market Demand

Some lawyers have been wondering whether the Supreme Court would sustain a conservation statute which goes further than to provide merely for coequal and correlative right protection and to prohibit wastes injurious to the proprietors in the pool, that is, one which is intended to conserve the oil or gas solely in the interest of the general consuming public and requires that it be held in the ground and preserved, in part at least, solely for the benefit of future generations. The writer doubts that that particular question will come before the courts for decision, because it is unlikely that any state or the national Government (save in the event of war) will ever restrict production below market demand in any pool save only for one perfectly sound reason, not at all necessarily involving conservation for future use, namely, in order to prevent underground waste due to undue dissipation of reservoir energy and/or water encroachment. Unless this kind of waste is prevented, the rights of landowners are most seriously injured. The production in a pool, if limited to market demand and prorated accordingly, can easily be so large as to result in an undue use of reservoir energy and in the premature encroachment of water, either or both of which will greatly diminish the ultimate recovery from the formation to the great injury of the landowners within the pool. The underlying or adjacent water will too hastily, instead of symmetrically, enter the formation and seal off large amounts of otherwise recoverable oil. Compressed gas in solution with the oil will be permitted to expand, separate from the oil and escape and leave behind it oil which it would bring out if the flow were properly retarded.

Public Protected

Moreover, whatever adequately preserves and protects correlative rights will, at the same time, as a general rule, adequately protect the general public. The requirements of the consuming public can always be satisfied, and that at fair prices, unless—and this is not likely soon to occur—the known reserves in the ground should diminish very substantially without the discovery of new pools of consequence. Engineering skill has taught the industry how to explore for new oil pools at depths not dreamed of 10 or 15 years ago.

However, oil and gas are irreplaceable natural resources. Already the general public is actually consuming more than 2,000,000 bbls. of oil per day; and it has been because of the expectation that the producing industry would be able to supply this for daily consumption that millions of dollars have been invested in automobiles and other devices wherein the refined products of crude oil are used.

Additionally, the consuming public is now so dependent upon a continuous supply of these refined products that they are, in large measure, regarded as necessities. No one knows whether the next 10 or 15 years may develop a real shortage in the potential supply. Certainly, in view of these considerations, there is a public interest demanding that this irreplaceable, nonmanufacturable, natural resource shall not be wasted either underground or on the surface, but that all of it shall be recovered and preserved for devotion to useful purposes. In addition, the public ought to be regarded as entitled to a limitation upon the uses to which it is put. This is illustrated by the statute which was sustained in Walls vs. Midland Carbon Co. and the order of the Oklahoma Corporation Commission which was sustained in Quinton Relief Oil & Gas Co. vs. Corporation Commission, whereby the burning of natural gas to manufacture carbon black was prohibited in the interest of preserving the gas for domestic and industrial heating purposes, although this effected a retarded realization of its value by the landowners. When we consider this aspect of conservation, it is hard to believe the courts would fail to sustain a reasonable regulation for conservation purely in the interest of the general public.

Problems That Remain

The decision in the Champlin case has not brought to an end the problems before the producing industry. California needs a more adequate statute and has failed so far to enact it. The conservation statute has been uniformly sustained, but orders of the Railroad Commission enforcing it are still involved in suits before the courts, state and Federal, in that State. One case wherein the Federal Court struck down an order of the commission upon a holding that it was primarily intended to maintain high prices for oil, is pending on appeal in the Supreme Court of the United States. Another suit wherein the law and orders were sustained in the state court, and by an intermediate appellate court, is pending on appeal in the State Supreme Court. Subsequent orders are involved in another Federal Court case which has been tried and submitted.

In both the East Texas Field and the Oklahoma City Pool there are a few instances of violations of the proration orders, and these are greatly concerning state authorities and the industry in general. It is believed that the legislatures of these states will soon prescribe adequate penalties for such violations and provide appropriate means for their enforcement. Hearings before commissions and proceedings of various types in state courts are quite common. The violators often assign as an excuse that certain avowed prorationists are in some manner gaining some advantage, or that someone else has secretely overproduced, and then they say their only remedy is to secretly lay a buried pipe line and clandestinely operate their wells above the allowed percentage. In some instances it has been asserted that they often conceal the excess production from state authorities and royalty owners. It will be necessary for the statutes to contain severe penalty provisions that are valid.

Antitrust Laws

One more thought may appropriately be advanced. Antitrust laws ought not to be regarded as violated by co-operative development and operating agreements. It seems clear that the inherent natural union of interest and estate between and among the several proprietors in a pool, a union not resulting from agreement or concert of action, but rather due to natural conditions, coupled with the obvious injuries in the form of drainage and underground and surface wastes that flow from a failure to co-operate, either voluntarily or by compulsion, should entitle the owners voluntarily to unite for their own protection without being guilty of stifling commerce or trade to the injury of the public. The hundreds of oil pools in the country would still remain in open competition with one another. This is thought by many to present the best plan for satisfying all concerned that no one producer is gaining any undue advantage. Many responsible producers favor agreements of this kind as the most practical means to gain a fair distribution of the recoverable oil in any pool and at the same time to reduce the cost of its recovery; but fear of prosecution deters them. It is believed that this fear should be removed by appropriate legislative enactments or amendments of existing laws.

POLISH OIL STRIKE ENDED

NEW YORK, Oct. 17.—Compromise agreements between oil companies and the labor unions involved has brought to a close the strike which practically paralyzed all operations of the Polish oil industry for the greater part of September, according to reports from abroad.

The agreements reached provide for an average wage reduction of 10 per cent for field workers and 8 per cent for refinery workers, with the workers retaining all social benefits, such as medical attention, annual vacation with pay, and notice of dismissal. The original proposal of the companies provided for wage cuts running up to 30 per cent, and substantial curtailment of "social benefits."

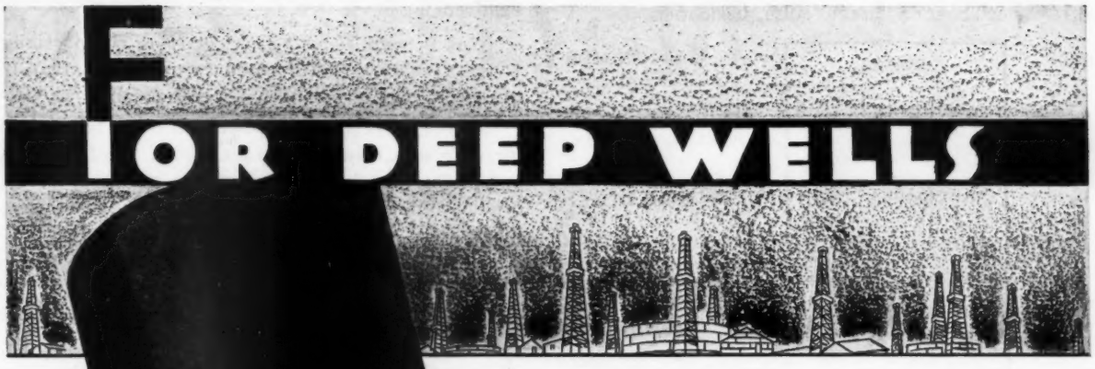
NEW ENGLISH REGULATIONS

NEW YORK, Oct. 15. — The British Home Office has announced new regulations covering the transportation of gasoline, to become effective at a later date.

Under the revised rules, tank wagon capacity is limited to a maximum of 2,500 gallons with 1,500 gallons set as the maximum unless the design of the vehicle receives special approval. Tank trailers are limited to a maximum of 800 gallons, and no trailer will be permitted to be attached to a tank wagon of greater capacity than 1,500 gallons.

BOSTON BUYS FUEL OIL

NEW YORK, Oct. 15.—Contracts for supplying the various departments of the city of Boston with their fuel oil requirements during the year, October 4, 1932, to September 30, 1933, have been awarded by the city as follows: Standard Oil Co. of New York, Inc., $23,027.90; Cities Service Refining Co., $98,538.01, and Petroleum Heat & Power Co., $61,344.



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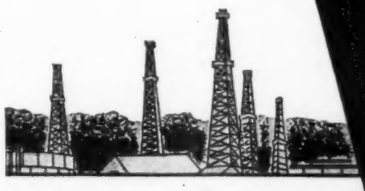

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The OIL and GAS JOURNAL

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On the Way Out

Since the first announcement of a crude price increase there has been but one question in the oil industry—would all the companies meet it?

No attention whatever seems to have been given to the more immediate question whether the production conditions on which the increase was based were being met.

True, the Texas commission fixed allowables but, as was remarked in these columns last week, "allowables are not automatic".

What has been done or is being done in Texas to put those allowables into effect? What instrumentality is being employed to see that production is being kept from going above the allowables scheduled?

While the industry at large has been thinking of the price increase who has been looking after the reduction in output upon which that increase was offered?

And, what is more, what guarantee is there that, if all the buying companies met the new price, the production situation would not be allowed to drift and possibly get worse instead of better?

There can be no doubt that with gasoline demand going off and the crude supply and demand situation where it was there would have been no possibility of an increase in crude prices.

It was the action of the Texas commission and the assumption that the reductions could be made that justified the increase, both from an economic standpoint and as a belated act of justice to the oil producers who have so self-sacrificingly helped check overproduction.

It could never have been intended as a license to continue production above the limit of demand. Buyers who were willing to pay more for crude could not be expected to continue to do so if oil producers continued to flood the market with more crude than required.

It would have been a lot better and more effective if the oil industry had concentrated its attention upon getting producers to keep within the new allowables instead of standing tip-toed waiting to see who would meet the price.

That goes, also, for time wasted in criticism of the buyers who have not met the price. The same amount of energy spent in strengthening sentiment in the industry behind the necessity for keeping down production would get us somewhere.

It is perhaps well for the industry that the price increase has not been made unanimous before the goods were delivered. Experience has proved that benefits obtained in advance are quickly forgotten.

We do not know and can only guess what is in the mind of one buyer which has said it cannot meet the price advance under present conditions and until present control of production reduces supply below demand.

This is not a blunt refusal denying the possibility of an advance. It may rather be interpreted as a promise that if the reduction is made and supply balances demand an advance will be possible.

Summed up, the situation seems to be like this: The original increase was made in recognition of the State's order of reduction and of the fact that producers who had co-operated in keeping down production were entitled to the fair prices they had been assured would follow the limiting of supply to requirements.

That advance proved the good faith of the buying companies. But the willingness of Texas producers to carry out that reduction has yet to be proved.

The advance will not be confirmed until they do. They have been shown that they can get it and also that if they do not do their part the increase cannot hold.

It is not a question of what any purchasing company wishes to do; it is a plain question of cause and effect. Supply limited to demand assuring the purchasers that there will be no distress oil or gasoline to cut under their market will permit them to pay a decent price. Too much oil, whether illegally produced or produced above the state allowables, will feed the supply of price cutters and make a decent price for crude impossible to maintain.

It is recognized that the situation in Texas is peculiar because of the peculiar kink in the legislative mind that fights shy of limitation to market demand as possible price fixing.

But the time is coming through education in the hard school of adversity for clearer thinking on the subject of prices and costs. The nation as a whole is just emerging from the illusion that cheapness is everything. That is a bottomless pit.

Value rather than the price tag is what counts. Value cannot be produced by an impoverished industry. The laborer is worthy of his hire and an industry is worthy of a just return on its products.

Unregulated overproduction beyond any conceivable demand is ruining the oil industry and not benefiting the consumer whose own welfare as a member of the national community is affected by the condition of any of its main industries.

In his address before the American Bar Association, published in this issue, W. P. Z. German sums up the price issue very clearly.

Some appear, he says, to find it difficult to disassociate proration and price control. But . . . "in point of fact, is not uncontrolled production also price fixing and price controlling? An incidental effect of it is to deflate prices, often far below the cost of production, and to destroy property values. It is begging the question for a producer to say to the prorationist 'Your motive is to control prices'. He does not add, 'You should let me take your oil rather than commit so grave an offense as that'."

The new report of the Federal Oil Conservation Board also published in this issue says:

"The American oil industry gives indications of being the first basic industry to emerge from the world depression. The effects of the industry's rising purchasing power are beginning to be felt. They will be further manifested during the fall and winter if production can be kept on a stable basis, but continued stability will depend largely on the situation in the East Texas area."

The price situation should help. If Texas producers will stabilize their production at the allowables set by the state commission the price will stick. If production remains uncut or insufficiently cut to allow national production to drop to the 2,000,000 barrels daily declared necessary to stabilize supply and demand then the price must fall, perhaps even below what it was before the recent advance.

The Oil and Gas Journal has faith that the good sense of Texas producers will prevail and that the oil industry will continue to lead the way out of the depression.

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Optimistic Interpretation Placed Upon Humble Statement by Most Mid-Continent Refiners

By W. T. ZIEGENHAIN

Mid-Continent refiners took advantage of the improved crude oil price situation during the past week to advance their quotations on gasoline, kerosene, furnace oils, gas oil and the lighter grades of fuel oil. Natural gasoline manufacturers conscious of the improved refinery market and witnessing an urgent demand for their superstabilized products advanced quotations sharply. The better condition in these markets gave a stronger undertone to the rather sluggish lub market. Wax inquiries were more numerous and although no price advance was posted refiners are now in a position to bargain to their advantage over the immediate future.

The present strengthening of practically all refinery prices is directly traceable to the advance in the price of Mid-Continent crude posted by many buyers a week ago. The fact that the Standard Oil Co. of Indiana and the Mid-Continent buying subsidiaries of the Standard Oil Co. of New Jersey have announced they would not meet the advance at this time, has not dampened the hopes of refiners that a still higher price level may be obtained for their products over the immediate future. This better feeling of the past week has been strengthened by interpreting the notice of the Humble Oil & Refining Co. it would not meet the advance "until conditions improved" to mean that at such a time as producers curtail their output to the allowable set by the Texas and Oklahoma commissions, and as soon as tax evasion and unreasonable price cutting are removed from the retail market to the point where higher station prices could be supported, the Humble would feel justified in advancing crude prices.

Refined Market Barometer

Sentiment has improved in all refinery marketing centers as the result of the support given by a number of buyers to the advance in the posted price of Mid-Continent crude initiated by the Sun Oil Co. and Sinclair Prairie companies a week ago. A constructive and optimistic interpretation is placed upon the statements of the Humble Oil & Refining Co. and the Standard Oil Co. (Indiana) in which they give reasons for not meeting the advance at this time. So, with the thought of a drop in crude prices pushed aside, refiners feel they will be able to hold the ground gained up to a week ago and as the seasonal demand for such products as kerosene, furnace oils, fuel oil and wax is felt the general price trend will continue upward. Natural gasoline prices in the Mid-Continent advanced sharply. Neutrals and bright stocks were unchanged in the Mid-Continent, slightly lower in Pennsylvania and generally higher at Gulf Coast plants.

Mid-Continent—All grades of refinery and natural gasoline advanced. Kerosene and furnace oils in greater demand and prices are fractionally higher. Light fuel oils and gas oils advanced with balance of fuel oil quotations firm. Lubricants and wax unchanged.

Eastern Seaboard—A stronger tone was shown in the market for all products except in the case of cylinder stocks, the prices on which declined fractionally.

Gulf Coast—Motor fuel, kerosene and fuel oil prices unchanged. Neutrals were advanced but trading is light.

Chicago—Fractional advances were again posted in the prices on gasoline, kerosene and furnace oils. Marketers share in the belief of the Standard Oil Co. (Indiana) that additional efforts must now be made to improve the retail market and thus strengthen the refinery and crude markets.

California—Motor fuel prices firm. Natural gasoline fractionally advanced. Export market unchanged.

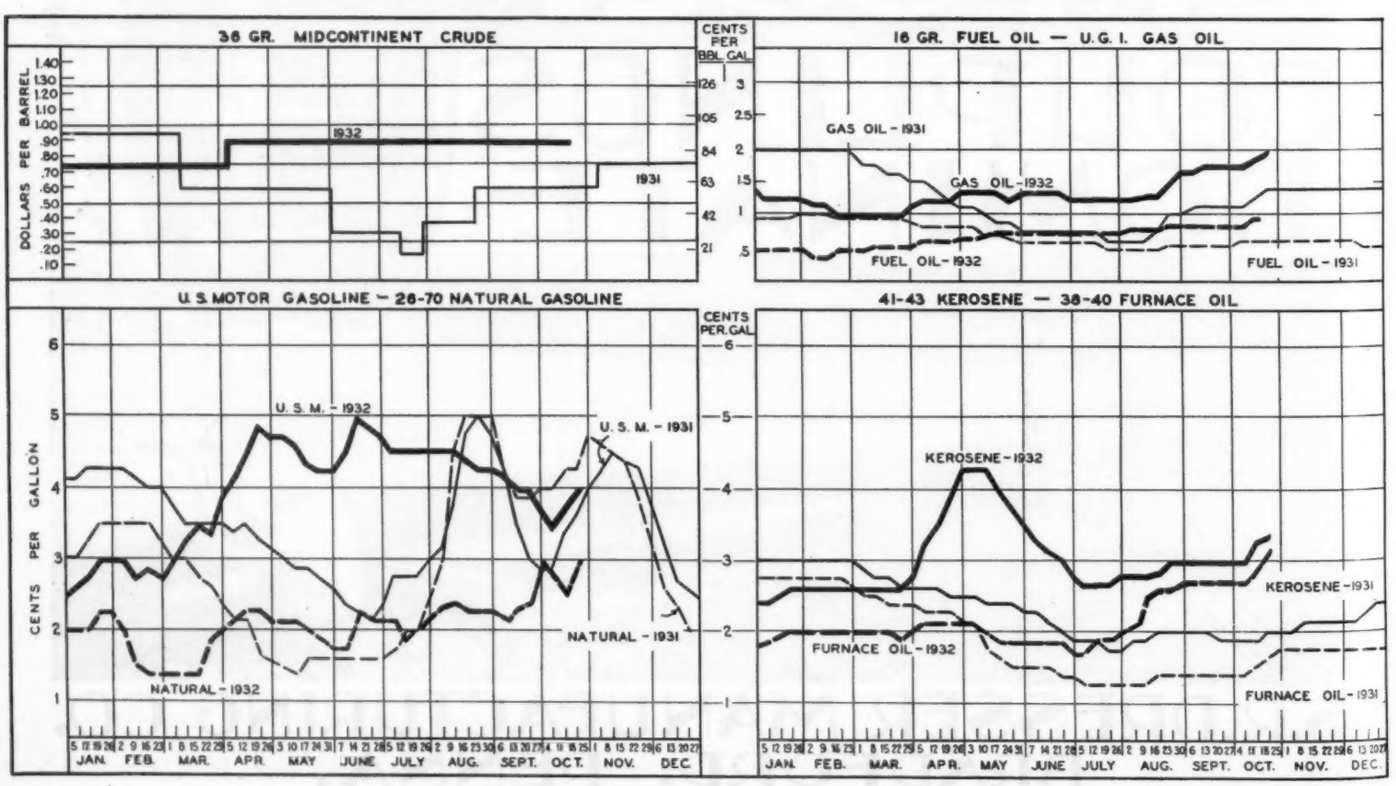
Pennsylvania—Gasoline prices eased off slightly and price concessions were given on a large portion of the list of neutrals and cylinder stocks.

The statement of the Humble on which this construction of thought is based follows: "The Humble Oil & Refining Co. reiterates its position in support of conservation to the end that all waste be prevented; correlative rights of competitive producers be protected; and likewise reiterates its belief in fair prices to producers of crude oil and to consumers of gasoline. We met the price advance in April of this year at which time we said: 'This company desires higher prices for crude oil just as much as any producer does. Present product prices do not justify purchasers paying more for crude. Producers cannot hope to command a higher price for crude oil as long as the amount they offer for sale is greater than purchasers are willing to buy. Responsibility for securing this balance rests squarely upon those who have initiated and sponsored this advance.'

"The sponsors of the present crude oil price advance and curtailment program promise that a balance between supply and consumption demand will be attained; that production in excess of allowables will be eliminated; and that wholesale product prices will be realized that will justify the crude oil price advance. We earnestly hope and we believe that these promises can be fulfilled, but we are unable to increase the existing disparity by paying higher prices under present conditions. In the light of past experience, deliberate consideration compels us to await the fulfillment of these promises before posting higher prices."

There is a general belief among marketers that the Humble is not only willing but anxious to post higher crude prices when it feels the refinery and retail market may justify this action. It has even been suggested that when such an advance is posted, it will come in the form of a 25-cent per barrel increase. While all of these requirements call for a rather ambitious program there are certain basic factors now appearing which favor its realization. Most important of these is that producers in the East Texas Field, large and small alike, favor the more orderly development of remaining undrilled acreage. Also the present price of 98 cents a barrel, the lowest posted

Representative Mid-Continent Quotations on Crude Oil and Refined Products Basis Oklahoma (Group 3)


36 GR. MIDCONTINENT CRUDE
DOLLARS PER BARREL
1932
1931
CENTS PER BBL GAL
16 GR. FUEL OIL — U.G.I. GAS OIL
GAS OIL - 1931
GAS OIL - 1932
FUEL OIL - 1932
FUEL OIL - 1931
U.S. MOTOR GASOLINE — 28-70 NATURAL GASOLINE
CENTS PER GALLON
U.S.M. - 1932
U.S.M. - 1931
NATURAL - 1931
NATURAL - 1932
41-43 KEROSENE — 38-40 FURNACE OIL
CENTS PER GAL
KEROSENE - 1932
KEROSENE - 1931
FURNACE OIL - 1932
FURNACE OIL - 1931
JAN. FEB. MAR. APR. MAY JUNE JULY AUG. SEPT. OCT. NOV. DEC.

price in the field, producers can realize a profit when selling only 40 bbls. daily and they are not willing to hazard their position by insisting on a higher allowable. The change has come about because engineers are now reporting a greater loss of driving pressure per month. The loss of pressure when 325,000 bbls. of crude were produced daily ranged from 5 to 9 pounds per month, depending upon the location in the field. When the allowable was increased to 375,000 bbls. two months ago the loss in pressure was increased to from 9 to 15 pounds per month in the same wells. This more rapid loss of driving pressure could mean but one thing, and that is the lower ultimate recovery of oil per well and a hastening of the day when expensive means for recovering the oil would have to be adopted.

While this discussion may seem a bit technical in a summary of the Mid-Continent refined oil market it has a place because the trend of the refinery market in the past two years has been, and for the next six months at least, seems to hinge largely on the action of producers in the East Texas Field. It will be remembered that a week ago the Texas Railroad Commission lowered the allowable back to 325,000 bbls. and the belief is now that it will be met.

Also, through the 12-cent advance posted by many of the buyers in that field there is concrete evidence that the producers are to be rewarded and the statement of the Humble will support the belief. So, there seems to be but one logical course for producers, refiners and marketers to pursue over the immediate future and there are more chances of the realization of this program of improving prices than ever before.

While the strength of the present market may be said to rest partly upon hopes it is not without foundation. There has been an actual shortage of certain products. This shortage has been most apparent in the low vapor pressure grades of natural gasoline, in kerosene, furnace oils, and low cold test gas oil and high gravity fuel oils. This shortage may be temporary but it is real now and reflects the constructive move on the part of refiners to curtail crude runs to within the bounds of consumer demands. Jobbers who anticipated buying these products from day to day as their needs appeared now find the seasonal demand ahead of production. The expected drop in crude prices has been converted into a price advance and a renewal of confidence in the strength of the specialty market has thus transferred strength to the entire market.

Gasoline

The U. S. Motor grade of gasoline moved to a bottom of 4 cents on Monday of this week. The effort of some of the larger companies to bring the market to the 4½-cent level which price they had been quoting for more than two weeks seemed nearer realization but on Tuesday there was substantial quantities of low octane U. S. Motor gasoline offered at 4 to 4¼ cents to make that the trading price range. The strengthening of the natural gasoline market was taken as an indication that the refinery gasoline market was in a favorable position to not only hold in case of a lull in buying over the next week but can advance with any improvement in the demand.

On Monday the price of 26-70 natural gasoline was firm at 3 cents. Refiners had increased their purchases over the past week and jobbers were making larger commitments on the 11-pound and 15-pound grades, all of which caused a shortage of material for immediate delivery. The 11-pound natural is made in comparatively few plants and most of it is handled under contract. The contracts are based upon the U. S. Motor refinery price and for the first time for months the contract price fell short of the spot market which was 4½ cents flat. The improved jobber buying of the low vapor pressure grades of natural has diverted enough of the 26-70 grade into the production of these superstabilized grades to warrant the stiffening of the price of the latter also. So, unless there is a relapse in the refinery market, the higher level of natural gasoline will be maintained despite the fact this level has been reached rather rapidly.

Kerosene

Three and three-eighths cents was the going price paid for 41-43 kerosene of good burning quality. This was an advance of one-eighth cent over the price a week ago and the demand for the material has not diminished. As was stated a week ago, the production of kerosene in the Mid-Continent due to lesser crude runs and reforming has come at a time when the demand for the products witnesses a seasonal increase and jobbers were not prepared.

Distillates

The low flash distillates and furnace oils continue to feature the market because of their ability to attract inquiries for increased amounts despite a further advance in the price. The reason for this is the same as for kerosene and as the winter season is approached refiners feel sure they will be able to adopt an aggressive attitude in trading.

Gas Oil and Fuel Oil

The lighter fuel oils and gas oils of low cold test advanced during the week. Since the heavy grades of fuel oil did not advance as much as the lighter grades, the reason for the improvement in the general fuel oil market is believed to be actual current consumer demands and not a temporary buying bulge due to the crude advance.

Straw color gas oil of zero to 10 cold test continues to command a premium and its price went to 2⅞ cents or within one-half cent of the going kerosene price.

Lubricants and Wax

Neutral oil prices and bright stock prices remained unchanged and conflicting factors entered into the market situation during the week. There has been a recession in the prices for neutrals and bright stocks at many eastern points, particularly throughout the Pennsylvania refining area. This weakness has not been reflected here in the form of price concessions because of the strength of the general market but has acted to hold inquiries to normal at a time when an influx of inquiries and orders could be expected.

The wax market in the Mid-Continent is in a position to advance at any time the New York price shows signs of advancing.

Proposed Tanker Pool to Help Stabilize the East Coast Motor Fuel Market

By A. E. MOCKLER
New York Bureau, The Oil and Gas Journal

NEW YORK, Oct. 17.—Proposed formation of a tanker pool on the part of American owners, hailed as a step toward correcting conditions in the shipping market which are making for unprofitable operation of oil tankers, in reality goes far beyond the immediate problems of tanker owners and reveals itself as a further step toward the stabilization of the East Coast gasoline markets.

The present rates on tankers for the movement of gasoline from the Gulf to Atlantic Coast ports north of Hatteras is 15 cents per barrel, while the present intercoastal rate on gasoline ranges between 42 and 45 cents per barrel. The stabilized rate schedule to be sought by the tanker pool, it is understood in shipping circles, will be 42 cents per barrel on shipments from the Gulf and 84 cents per barrel on shipments from California.

With present distressed rates for tanker charters in the coastal and intercoastal trades, tankers are not only being operated at a loss in many instances, but the low tanker market is indirectly responsible for much of the weakness in Eastern gasoline markets, due to the fact that distressed motor fuel from California and the Gulf can be shipped into East Coast territory at such low rates. The proposed rate schedule will make a difference of two-thirds of a cent per gallon on the Gulf Coast gasoline laid down at Atlantic ports, and a difference of almost a full cent per gallon in the laid down cost of California gasoline at East Coast ports, which will take away some of the margin of operators who have been cutting prices in tank car markets with gasoline from these outside refining areas.

More than two-thirds of the tankers under American registry, eligible for the coastal and intercoastal services, are owned by the major oil companies which are sponsoring the pool plan. A summary of the tanker fleets of American oil companies (including only boats under American registry) shows the following approximate totals:

Company—	No. of tankers
Atlantic Refining Co.	17
Cities Service Transportation Co.	15
Gulf Refining Co.	28
Pan American Foreign Corp.	27
Richfield Oil Co. of California	9
Sinclair Navigation Co.	13
Standard Oil Co. of California	21
Standard Oil Co. of Indiana	4
Standard Shipping Co. (S. O. N. J.)	45
Socony-Vacuum Transportation Co.	42
Standard Transportation Co. (S. O. N. Y., Inc.)	9
Sun Oil Co.	12
The Texas Company	26
Tide Water-Associated Transportation Corp.	6
Tide Water Oil Co.	7
Union Oil Co. of California	11
Pure Oil Steamship Co.	3

Out of the total of some 377 tankers listed under American registry, available for participation in the proposed tanker pool, a number of vessels are not ordi-

(Continued on Page 31)

American Petroleum Institute Weekly Refinery Statistics

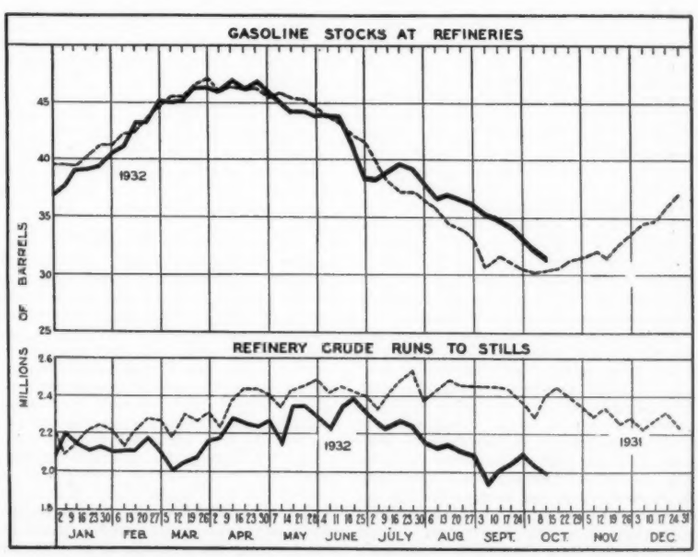
Figures below reported for week by American Petroleum Institute. (1) Per cent refinery capacity represented. (2) Daily average crude runs to stills. (3) Gasoline stocks. (4) Gas oil and fuel oil stocks. All figures in 42-gallon barrels.

Week Ending October 15, 1932, Compared to Week Ago

	Week ending October 15				Week ending October 8			
	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)
East Coast	99.1	464,000	3,915,000	9,314,000	99.1	411,000	4,301,000	9,181,000
Appalachian	95.0	92,000	974,000	823,000	95.0	81,000	989,000	873,000
Ind., Ill., Ky.	97.5	303,000	3,246,000	4,160,000	97.5	266,000	3,423,000	4,119,000
Okla., Kans., Mo.	88.4	218,000	2,856,000	3,054,000	88.4	207,000	2,973,000	3,169,000
Tex. Gulf	98.2	388,000	4,501,000	10,461,000	98.2	387,000	4,418,000	10,501,000
La. Gulf	97.3	83,000	1,267,000	4,052,000	97.3	64,000	1,295,000	4,113,000
Inland Texas	72.1	92,000	1,128,000	2,042,000	72.1	95,000	1,078,000	2,081,000
N. La. and Ark.	94.6	43,000	97,000	524,000	94.6	41,000	102,000	551,000
Rocky Mtn.	91.4	31,000	1,200,000	474,000	91.4	27,000	1,233,000	481,000
California	94.6	424,000	12,121,000	100,959,000	94.6	426,000	12,098,000	100,673,000
Total U. S.	93.6	2,138,000	31,305,000	135,863,000	93.6	2,005,000	31,910,000	135,742,000

Week Ending October 15, 1932, Compared to Year Ago

	Week ending October 15				Week ending October 17, 1931			
	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)
East Coast	99.1	464,000	3,915,000	9,314,000	100.0	460,900	4,045,000	10,802,000
Appalachian	95.0	92,000	974,000	823,000	91.8	110,300	1,236,000	1,657,000
Ind., Ill., Ky.	97.5	303,000	3,246,000	4,160,000	98.9	352,100	3,501,000	5,285,000
Okla., Kans., Mo.	88.4	218,000	2,856,000	3,054,000	89.6	256,700	2,756,000	5,041,000
Tex. Gulf	98.2	388,000	4,501,000	10,461,000	99.8	414,000	4,106,000	8,226,000
La. Gulf	97.3	83,000	1,267,000	4,052,000	100.0	121,000	544,000	2,693,000
Inland Texas	72.1	92,000	1,128,000	2,042,000	....	137,300	1,345,000	2,344,000
N. La. and Ark.	94.6	43,000	97,000	524,000	....	51,400	152,000	927,000
Rocky Mtn.	91.4	31,000	1,200,000	474,000	89.3	48,000	1,288,000	831,000
California	94.6	424,000	12,121,000	100,959,000	97.1	490,400	11,804,000	97,125,000
Total U. S.	93.6	2,138,000	31,305,000	135,863,000	95.2	2,442,100	30,836,000	135,931,000



Data based on weekly reports of American Petroleum Institute. Figures for week just ended not shown in graph but are included in accompanying table

Marketers in Chicago Territory Do Not Agree On Remedial Measures for Industrial Ills

By ROBERT C. CONINE
Chicago Bureau, The Oil and Gas Journal

CHICAGO, Oct. 17.—Reaction to the Standard Oil Co. (Indiana) announcement last week that the company "cannot advance its posted prices for crude oil despite the recent action of certain other companies," reveals a serious conflict in convictions in the Chicago district oil trade circles in the matter of identifying the actual destructive forces in the industry and the application of remedial measures which are not mere palliatives which permit destructive work to continue under a false feeling of ease. On one hand it is contended that a price improvment in the gasoline tank car markets would promptly follow a crude advance by the Standard Oil Co. of Indiana, thus justifying the crude advance; on the other hand it is pointed out that justification should come first, and this view takes into consideration the experience of the past two years which, it is contended, has demonstrated the short-sightedness of too many refiners—those who cannot refrain from attempting to "cash in" on the least sign of betterment.

Contend Real Remedy Ignored

Several major and semimajor oil company executives and managers in this district accept blame, and share it with the Standard company for one of the principal adverse factors in the service station gasoline markets. This is in connection with the margins given to dealers. Margins guaranteed to jobbers come in for even more drastic criticism. The fact that numerous service station operators in the territory are allowed margins of 3 cents on Ethyl, 2.5 cents on regular grade and 1 cent on third grade gasoline, plus a half cent to a full cent or more for various items such as rent, trucking and so on, tempts many of the dealers to split their margins with the consumers. In Chicago, where the margins are even greater, that is, 4 cents on Ethyl, 3.5 cents on regular, and 2 cents on third grade gasoline, plus other considerations, the sharing of margins with motorists is a common occurrence. Certain majors and semimajors complain that the 1-cent commercial discount contract which has been generally adopted since its introduction October 1, by Standard Oil Co. of Indiana, is not "panning out" well at all. Uncontrolled service station accounts are reported almost entirely out of hand in the matter of recognition of a definite service station posting. The service station operators who continue to allow a 2-cent discount per gallon at the time of purchase to motorists who insist on the discount, include many on the books of major and semimajor oil companies.

This unfavorable situation, according to the general sales manager of one of the largest refining and marketing companies in the territory, will continue until the margins allowed to dealers are narrowed down to a point which will not permit the dealer much leeway in the matter of setting up unauthorized service station prices. "Experience," this marketer says, "does not lead us to hope for the general application of this remedy at any time soon. We know that certain refiners who class themselves as supporters of constructive movements in the industry are in reality the worst offenders of good marketing practices. These refiners thrive by naming gasoline tank car prices which are under the ruling markets, and all of their actions appear to be directed toward one end, that is, ability to undersell competition. It appears, therefore, a vain hope that any major facing these facts will have the hardihood to cut down the dealers' margins until we have far greater assurance than is now given us that irresponsible refiners will not make connections with their counterparts in the crude oil producing end of the business."

Standard's Reasons

Somewhat in this vein is the explanation given by Standard Oil Co. of Indiana for its refusal to meet the crude oil price advances made by other oil companies. "Conditions do not warrant even the present prices and will not give necessary support to an increase," the official statement reads. It continues, "Everybody in the industry knows that with consumption of gasoline falling off enormously, price cutting is rampant throughout the oil business. Although producers are making commendable efforts to control their problems, crude is still being produced in excess of demand. Some of it is being run illegally and sold at prices that jeopardize the posted price structure. Refineries are manufacturing more gasoline than is needed. Many are dumping at cut prices. Aided by rising taxes, tax evaders are wrecking retail markets wherever they operate. There is also much retail price cutting by reputable marketers who are striving to hold volume of sales regardless of profits."

Standard Statement Assailed

E. B. Reeser, past president of the American Petroleum Institute, entered prompt denial that "refineries are manufacturing more gasoline than is needed." Mid-Continent refineries, Mr. Reeser said, are running at 50 per cent of capacity, or less. Other spokesmen for the price advance denied that crude oil is now being produced in excess of demand. In Oklahoma, according to reports, regulatory action may be contemplated in strategic fields, such as Seminole, where the Stanolind company is a large buyer. It is recalled that Standard Oil Co. of Indiana met the last crude price advance, April 11, after holding out from April 1. It is indicated that the Standard company is more determined in its stand this time and that much more convincing evidence that conditions are better must be forthcoming to shake the company from its stand. With Carter Oil Co. showing a hesitancy in changing crude prices, we have a repetition of the unsettlement which marked the industry in April.

Service Station Gains

The process of cleaning up that 75 per cent of the territory where subnormal service station markets exist moves apace and some improvement appears to be resulting from the decision of the major companies to meet all price cutting activities promptly. Normal service station markets were restored at two of the principal points in the territory on October 12, when the service station price at Decatur, Ill., was advanced to 17.6 cents from 15.6 cents, and at South Bend, Ind., where the service station posting was advanced to 18.7 cents from 16.7 cents. The tank wagon postings did not require revision. At scores of smaller points in the territory the normalizing process continues, especially in Illinois and Indiana.

Service station operators who look to blended motor fuel for a continuation of their policy of underselling competitors have struck a serious snag. Distributors and brokers Monday were advising their customers that natural gasoline and blending naphthas have moved practically out of reach. According to reports from Tulsa there is very little natural gasoline available, and refiners are offering little naphtha. It appears that many of the naphtha sources are shut down or have revised their operations so that they are producing little material suitable for blending. The prices quoted on natural gasolines in the Chicago district Monday were "outlandish" with 26-70 material over 3 cents, and the more stable grades accordingly higher. In fact, prices on the stabilized grades are such that there are few buyers and several natural gasoline producers have announced that they will discontinue stabilizing the 26-70 grade for the present. The 50-52 450 endpoint blending naphtha advanced from 3⅜ cents to a range of 3¾ to 3⅞ cents. However, there is considerable discussion in the Chicago district oil trade circles which indicates a doubt that the natural gasoline prices will be maintained for any length of time.

Gasoline Tank Car Markets

The gasoline tank car markets were slightly retarded in their upward climb by the announced refusal last week of Standard Oil Co. of Indiana to meet the crude oil price advance made effective Saturday by most crude purchasers in Oklahoma, Texas, Kansas, Louisiana, Arkansas and New Mexico. At least another quarter of a cent would have been added to Monday's ruling prices, according to marketers, if the Standard company had met the advance.

In the Chicago district the jobbers were apparently unconcerned when it was indicated to them that the turn had been made from a buyers' market to a sellers' market. Distributors and jobbers alike were showing no inclination to rush into the markets, although scattered purchases were made in the open markets at today's ruling prices. It appears that buyers are not fully convinced that the regulatory bodies in Texas, Oklahoma and Kansas will be successful in stamping out illegal runs of crude oil and outright production in excess of demand. They also feel that there will always be a few refiners handy who will sell at the prices offered by the buyers. Meanwhile, business at the service stations is not such as to run down their storage in a hurry, so that for a little while the jobbers will be content to wait and see what happens. This attitude is not altogether general as several good sized distributors have purchased in comparatively large volume in the open markets.

Ruling prices Monday showed advances of a quarter of a cent over the postings last week. U. S. Motor low octane material advanced to a range of 4 to 4¼ cents; the 60-62 400 endpoint gasoline was slightly in better favor than in several weeks and prices looked firmer at 4⅛ to 4⅜ cents. The 64-66 375 endpoint and the 68-70 360 endpoint gasolines are coming into better demand, especially in the northern sections of the territory where quick starting is featured. The 375 endpoint material is quoted at 4⅝ to 4¾ cents, while the 360 endpoint gasoline is offered at 4¾ to 5 cents. Prices for the remainder of the week, naturally, depend on developments in the crude oil situation, but uncertainty of many days' duration will bring up the problem of gasoline storage at the various bulk plants. With the service station postings subnormal by several cents, as in metropolitan Chicago, it is certain that jobbers will not encourage higher tank car prices.

Naphtha Tank Car Markets

American Mineral Spirits Co. and Deep Rock Oil Corp., Monday advanced their special naphtha tank car prices half a cent. The American company made downward adjustments in its two lacquer diluents to meet competitive conditions. Changes in the special naphtha tank car markets this week are as follows: Cleaners' naphtha, advanced from a range of 5¾ and 6 cents, to a range of 6¼ to 6½ cents; rubber solvent, advanced from a range of 5½ and 5¾ cents, to a range of 6 to 6¼ cents; Stoddard solvent, advanced from a range of 5¼ and 5½ cents, to a range of 5¾ to 6 cents; petroleum thinner, advanced from a range of 4½ and 4¾ cents, to a range of 5 to 5¼ cents; V.M.&P. naphtha, advanced from arange of 5½ and 5¾ cents, to a range of 6 to 6¼ cents. Petroleum spirits because of special conditions in the Chicago district was unchanged. American Mineral Spirits named new prices on its two lacquer diluents. The 180-250 grade was brought down to 7½ cents from a range of 7½ to 7¾ cents; and the 140-200 grade material was cut to 8 cents from a range of 5½ and 5¾ cents, to a son given for the cuts in the lacquer diluents was that competitors have started making these grades and sell them without taking into account the costly solvents they displace.

Kerosene Tank Car Markets

The kerosene tank car markets are showing little activity but are nevertheless revealing great strength. Prices continue to advance and there are indications that considerable kerosene will be used in preparing heating oils. In some quarters a possibly dangerous practice is in effect. This is the blending of gasoline with certain gas oils and heavy fuels to bring down the flashpoint and viscosity. Some marketers believe that a blend of fuel oil containing 60 gallons of gasoline to 8,000 gallons of fuel oil would not prove dangerous. However, it is related that experiments made with moderately weathered crude oil show that gasoline content in an oil used around homes is dangerous and constitutes a fire hazard. With prices on distillates mounting skyward and materials such as 28-30 and 26-28 zero fuel oils moving up around $1 per barrel, Group 3, considerable blending is being done and some of the loss in kerosene sales due to little farm activity may be replaced. Prices of kerosenes moved up Monday as follows: The 41-43 water white material was quoted at 3¼ to 3⅜ cents, and the 42-44 water white kerosene was offered at 3⅜ to 3½ cents. Both grades are reported scarce.

Distillates and Fuel Oils Advance

While there are some unfavorable aspects of distillate and fuel oil markets, they are confined to the Chicago switching district. In Chicago the gasoline service station operator has a cent additional margin and similar consideration is shown in quoting certain fuels in the switching district. For instance, a local refiner quotes 18-22 fuel oil at 50 cents, Group 3, for Milwaukee, while the district price may be as low as 35 cents, Group 3. Representative Chicago switching district prices on heavy zero fuels are: 18-22, 42½ cents; 16-20, 35 cents; 10-14, 30

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Gasoline Market Sentiment Improves in East as Crude Price Structure Shows Firmness

By A. E. MOCKLER
New York Bureau, The Oil and Gas Journal

NEW YORK, Oct. 17.—Recent developments in the crude oil market, notably the price increases put into effect by a number of companies buying oil in East Texas, have tended to create a more constructive feeling in East Coast oil trade circles and market sentiment, particularly with respect to gasoline, has undergone a decided change for the better. While the advances made in East Texas have by no means assured the permanency of present crude price schedules it is felt the increases came at the psychological time, and a determined effort to restrict production to allowables would put the finishing touch upon the corrective pattern.

Considerable speculation exists in trade circles as to just how soon an upward revision in refinery gasoline prices may be looked for in this area. The drastic price cuts inaugurated last month by the Standard Oil Co. of New Jersey have carried the posted price structure on an extremely low level, and an early rebound, as much as 1 cent per gallon, would not come as a complete surprise to the trade. The price cuts, however, were dictated more by their desirability as a corrective measure than by any other factor, and the likelihood of early improvement in gasoline selling prices continues dependent largely upon the extent of price cutting in the territory and the ability of independent marketers to continue to purchase gasoline at prices low enough to permit them to undersell the general market.

The reported plan for the pooling of American tankers engaged in the coastal and intercoastal services is coming in for close attention in trade circles, because of its potential effects upon gasoline marketing operations in this territory. The ability of independent marketers to charter tankers at record low levels to bring distressed motor fuel from California and the Gulf Coast into Atlantic Coast territory has played no small part in the demoralization of the tank car market here in recent months, and any successful move to get tanker charter rates back to a more nearly normal level would have a decided influence upon this situation. At prevailing distressed charter rates, gasoline can be moved from California to Atlantic Coast ports north of Hatteras at 1 cent per gallon freight, and from the Gulf to this area at little more than one-third cent per gallon. The proposed minimum rate in the event that tanker owners succeed in forming a conference would be 1 cent per gallon from the Gulf and 2 cents per gallon from California. These freight costs, in addition to handling charges, would substantially diminish the flow of distressed motor fuels from other refining areas into East Coast territory, it is believed.

Marketwise, there were few developments of outstanding interest during the week. Marketers in the District of Columbia-Maryland-Virginia area are being entertained by something new in the form of "wars"—a marketing war involving domestic heating oil. The latest form of trade strife was precipitated by the action of the Standard Oil Co. of New Jersey in offering domestic oil-burning equipment owners free service on their equipment in consideration of their placing their oil contracts with the New Jersey company. An organization of oil-burner marketers, backed up by the national association of oil-burner manufacturers, is vigorously combating the Jersey company's plan, which they characterize as an attempt to book the "lion's share" of the domestic furnace oil gallonage.

Major refiners and marketers are making some progress in their effort to revive the demand for premium grades of gasoline, and with cold weather prevailing it is reported that the gallonage on the premium motor fuel is steadily increasing. The sales attention to the premium fuel, however, has come too late in the year to permit marketers to make much of a showing on their premium fuel sales totals for the full year, and it is indicated that gallonage in this division will show an average decline for the full year of 30 per cent or more for the industry as a whole.

Refinery Gasoline

The market undertone has definitely stiffened in sympathy with the higher crude prices posted in East Texas, and there is some talk heard in market circles regarding the likelihood of an early advance of 1 cent per gallon in East Coast refinery gasoline prices. The industry, however, is awaiting action by Standard Oil Co. of New Jersey in this direction, and pending the action of that company's subsidiaries in meeting the advances posted in East Texas, it is not expected that the Jersey organization will take the lead in moving gasoline prices upward.

Cold weather throughout the greater part of the territory tended to restrict gasoline consumption somewhat during the past week, and a lessened demand from distributors was the natural result. Jobbers in most instances are keeping their storage full, however, anticipating that the next price change, when it materializes, will be in the upward direction.

Bulk sellers were quoting U. S. Motor gasoline, under 65 octane, at 5¼ cents per gallon, tank cars at terminals, at principal East Coast market centers during the week, with the price of 65 octane and above held all the way from 5½ to 6½ cents per gallon, Standard Oil Co. of New Jersey quoting the inside price to its contract buyers, and Texaco quoting the top price on its "Fire Chief" gasoline.

While 5¼ cents might be shaded on an occasional transaction, the general market appears firmly established at that level for the low octane gasoline, and most deliveries of high octane motor fuel are moving out within the range of 5½ to 6 cents per gallon at terminals.

Stocks of gasoline held on the East Coast as of October 8 totaled 13,968,000 bbls., an increase of 46,000 barrels over stocks on hand at the close of the previous week.

Tank Wagon Gasoline

The week was a rather uneventful one, in so far as prices were concerned, no general revisions being reported in any part of the territory. Recent price revisions in New York and New England territory appear to have been sufficient to meet the competition of price cutters in most parts of the area, and posted prices are being generally adhered to.

Some retail stations are attempting to "bait" motorists by displaying a posted price "plus tax." Thus, while most stations in the metropolitan New York area are selling gasoline at 7 gallons for $1.05, including all taxes, many stations display a price of "11 cents per gallon, plus tax." Thus, the unwary motorist who drives in to these stations to get a "bargain" in gasoline finds that he is paying exactly the same price, when taxes are added, as he would if he went to his regular service station.

While the major companies continue to stress the qualities of their "regular" grades of gasoline in current advertising, there is a noticeable tendency on the part of attendants at retail stations to endeavor to induce motorists to take the premium grade, the cold weather angle being emphasized.

There is some talk in marketing circles regarding the possibility of an early price advance in Standard of New Jersey territory, where posted prices were sharply cut last month, but thus far there has been no official intimation of any pending markup.

Kerosene

Sharp weather has made for continued activity in the refinery kerosene market, and a steady undertone prevailed throughout the week, with principal sellers adhering to the posted price of 5½ cents per gallon for 41-43 water white, in tank car lots, f.o.b. refineries.

Stocks of kerosene at East Coast refineries are reported to be unusually light for this season of the year, indicating continued strength in the refinery position. Some kerosene is moving in from California and from the Gulf Coast to supplement local production.

Surprisingly enough, domestic kerosene demand for the first eight months of 1932 exceeded that for the comparable months last year, totaling 20,844,000 bbls., against 19,649,000 bbls. Stocks on hand at refineries on August 31 were 6,247,000 bbls., against 6,734,000 bbls. on the same date last year. Exports during the first eight months of the year were more than 1,000,000 bbls. under those for the corresponding months of 1931.

There were no price changes reported during the week in the tank wagon kerosene market, and distributors reported that they were handling an exceptionally heavy gallonage for this season of the year.

The proposed tanker pool, if effected, should strengthen the position of East Coast kerosene markets, as the higher freight rates tentatively proposed by the pool sponsors would materially increase the laid-down cost of Gulf Coast and California kerosene at East Coast market centers.

Gas Oil

Gas oil gallonage has shown an upward surge during the past week, and the spot market continues unchanged at 4 cents per gallon for 28 gravity, plus, recycled oil, in tank cars, f.o.b. terminals. Contract movement was along broader lines, with this oil moving out at about one-half cent per gallon under the spot quotation.

Stocks of gas oil held at East Coast refineries continue fairly large, but the market undertone has been buoyed by recent price developments in East Texas, and it is felt in trade circles that there is now little likelihood of a general cut in gas oil in the near future.

Fuel Oil

The recovery in East Texas crude, as indicated by the price advances posted by several companies during the week, has developed a better feeling in Bunker "C" fuel oil markets, and refiners here are more optimistic regarding the outlook for the balance of the year.

The present posted price remains unchanged at 75 cents per barrel, and it is expected that refiners will carry this price into 1933 for contracting purposes, with suitable guarantees to buyers and the naming of a guaranteed maximum price to cover 1933 deliveries. Current demand for Bunker "C" oil from shipping interests continues fair.

Industrial fuel oil, 21 gravity, is meeting with a good demand at 3½ cents per gallon in tank car lots, f.o.b. refinery terminals, and considerable contract business is on refiners' books covering deliveries during the balance of 1932.

Diesel Oil

Bunkering business has continued active, and the market is steadier at $1.65 per barrel in bulk, or $1.71½ per barrel, f.a.s. harbor limits. A fair spot business is reported in the marine trade, although the bulk of the movement continues to consist of deliveries against contracts. Refiners have not yet named their contract prices for 1933.

Domestic demand for Diesel oil was larger during the week, and refiners continue to quote the market at 4 cents per gallon for 26-32 gravity oil, in tank car lots, f.o.b. terminals.

Furnace Oil

With the heating season getting under way in full blast, marketers have come back into the tank car market for replacement supplies, and a good spot movement prevailed throughout the period. Refiners continue to post No. 1 oil (36-40 gravity) at 5 cents per gallon and the No. 2 grade (32-36 gravity) at 4 cents per gallon, in tank car lots, at refineries.

Tank wagon movement has shown a sharp increase, and there is every likelihood that the current heating season will establish new high consumption records. Most of the domestic furnace oil business for the 1932-33 heating season is already on the books of refiners and marketers, and at the same price levels that prevailed during the 1931-32 season.

Lubs

Spot prices were again quoted off last week, reflecting continued lack of spot buying. Sellers were quoting 600 steam refined unfiltered at 19½ cents per gallon, a drop of one-half cent, with 650 steam refined unfiltered showing a drop of 1 cent at 21½ cents per gallon. The market for 600 flash steam refined stocks also sold off 1 cent per gallon at 22½ cents, with 630 flash steam refined off a corresponding amount at 27½ cents per gallon. Other grades were unchanged in the local f.a.s. market, with volume generally limited.

Neutral oils met with a fair demand, but pale oil, 100-2¼, was somewhat easier at 5 to 5½ cents per gallon, with red oil, 200-6, firmer at 8½ cents per gallon.

Gulf Export Market

Gasoline prices were quoted an eighth cent per gallon higher on all grades last week, and export kerosene at the Gulf showed a corresponding increase. There was some export inquiry for gasoline, but buyers' views were generally about a half cent under the market, and no cargoes were reported closed. English buyers who came into the market a few weeks ago for a cargo of 8,000 to 10,000 tons of stabilized casinghead gasoline, 20-pound vapor pressure, have raised their bid to

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REFINERY AND CRUDE PRICES

Quotations on refined products are for interstate or export movement except as otherwise noted

EXCLUSIVE OF TAXES

The following quotations are exclusive of the Federal excise taxes of 1 cent a gallon on gasoline and 4 cents on lubricating oils, which became effective June 21.

Gasolines

	Oct. 18		Oct. 11	
OKLAHOMA (Group 3)—				
*U. U. Motor	.04	.04¼	.03¾	.04
60-62 400	.04⅛	.04½	.03⅞	.04¼
64-66 390	.04¼	.04⅝	.04	.04¼
64-66 375	.04½	.04¾	.04⅜	.04½
68-70 350	.04¾		.04½	.04¾
NORTH TEXAS—				
*U. S. Motor	.03⅞	.04⅛	.03¾	
60-62 400	.04	.04¼	.03⅞	.04
64-66 390	.04¼		.04	
64-66 375	.04⅜		.04¼	.04⅜
64-66 360	.04½	.04⅝	.04⅜	.04⅝
†NORTH LOUISIANA—				
*U. S. Motor	.04½		.04¼	
60-62 400	.04⅝	.04¾	.04½	
†ARKANSAS—				
*U. S. Motor	.04½	.04⅝	.04½	
CHICAGO (Based on Oklahoma Group 3)—				
*U. S. Motor	.04	.04¼	.03⅝	.04
60-62 400	.04⅛	.04⅜	.03¾	.04¼
64-66 375	.04⅜	.04¾	.04⅜	.04⅝
Aviation fighting grade	.05	.05½	.05	.05½
68-70 360	.04¾	.05	.04½	.04¾

Octane Ratings—Above quotations cover price ranges on gasoline in which no octane rating is given. On October 18, in the case of the U. S. Motor and 60-62 400 endpoint grades, where an octane rating of 57-65, inclusive, is guaranteed, prices are three-eighths cent per gallon higher than quotations shown in above tables; where an octane rating of better than 65 is guaranteed, the prices are five-eighths cent higher. In the case of the remaining grades, gasolines of 65 octane rating or higher are quoted one-half cent higher than the quotation shown in above tables.

Unless otherwise provided by agreement of buyers and sellers, the Series 30 testing equipment of the Ethyl Gasoline Corp. is recognized as standard in determining octane ratings.

*Present distillation specifications on U. S. Motor gasoline are: 10 per cent evaporated, 167° F. maximum; 50 per cent, 284° F. maximum; 90 per cent, 392° F. maximum; residue not exceeding 2 per cent; maximum vapor pressure, 12 pounds. Additional specification on U. S. Motor gasoline available from bulletins of Bureau of Mines, Washington, D. C.

†For Arkansas, Louisiana and Mississippi delivery.

PENNSYLVANIA (inland refineries)—				
U. S. Motor	.05¾	.06	.05¾	.06
60-62 400	.05⅞	.06⅛	.06	.06¼
64-66 375	.06¼		.06¼	.06½
68-70 350	.06½		.06½	.06¾

Octane Ratings—In the case of U. S. Motor and 60-62 400 endpoint grades, same price differentials based on octane ratings as shown in above tables for Oklahoma and other Mid-Continent areas:

CALIFORNIA (domestic movement only)—				
54-58 U. S. Motor	.06	.06½	.06	.06½
58-60 400	.06¾	.07	.06¾	.07
EAST COAST—				
U. S. Motor, below 65 octane:				
New York (Bayonne)	.05¼		.05¼	.06
Boston	.05¼		.05¼	
Baltimore, Md.	.05¼		.05¼	.06
Charleston, S. C.	.05¼		.05¼	.06
U. S. Motor, 65 octane and above:				
New York (Bayonne)	*.05½	.06	*.05½	.06
Boston	.06	.06½	.06	.06½
Baltimore, Md.	*.05½	.06½	*.05½	.06½
Charleston, S. C.	*.05½	.06½	*.05½	.06½
GULF COAST (domestic)—				
U. S. Motor, 65 octane and above	.05½		.05½	
U. S. Motor, below 65 octane number	.04¾	.05	.04½	.05

*Contract price.

Naphthas

	Oct. 18		Oct. 11	
OKLAHOMA (Group 3)—				
50-52 450 (blending)	.03¾	.03⅞	.03⅝	.03⅞
PENNSYLVANIA (inland refineries)—				
50-54 430-450 (blending)	.05¾	.06	.05¾	.06
ARKANSAS—				
48-50 450 (blending)	.04½		.04½	
CHICAGO (Based on Oklahoma Group 3)—				
50-52 450 (blending)	.03¾	.03⅞	.03⅜	
Cleaners' naphtha, 56-58 gr., 200 i.b.p.-320 e.p.	.06¼	.06½	.05¾	.06
Lacquer diluent, 180 i.b.p.-250 e.p.	.07½		.07½	.07¾
Lacquer diluent, 140 i.b.p.-200 e.p.	.08		.08½	.09
Rubber solvent, 68-70 gr., 100 i.b.p.-300 e.p.	.06	.06¼	.05½	.05¾
Stoddard solvent, 300 i.b.p.-410 e.p. over 100° flash	.05¾	.06	.05¼	.05½
Pet. thinner, 290, 300 i.b.p.-415 e.p., over 83° flash	.05	.05¼	.04½	.04¾
V.M.&P. naphtha, 56-58 gr., 190-200 i.b.p.-330 e.p.	.06	.06¼	.05½	.05¾
Petroleum spirits	.04	.05¼	.04	.05¼

Natural Gasolines

	Oct. 18		Oct. 11	
OKLAHOMA (Group 3)—				
Grade 18-55	.03¾		.03¼	.03¼
Grade 26-70	.03		.02⅝	.02¾
Grade 30-70	.02⅞		.02½	
*Low pressure grades:				
15 lb. v.p. (max.)	.04		.03½	
11 lb. v.p. (max.)	.04½		.04	
NORTH TEXAS—				
Grade 18-55	.03⅝		.03⅛	.03¼
Grade 26-70	.02⅞	.03	.02½	.02¾
Grade 30-70	.02¾		.02⅝	
*Low vapor pressure grades:				
15 lb. v.p. (max.)	.03⅞	.04	.03⅜	
11 lb. v.p. (max.)	.04⅜		.03⅞	.04
NORTH LOUISIANA—				
Grade 26-70	.03¼		.02¾	.02⅞
CALIFORNIA—				
75-78 375	.04½	.05½	.04¼	.05½

Note—Grades 18-55, 26-70 and 30-70 are three of 24 grades adopted by the Natural Gasoline Association of America effective January 1. The grades are based on pounds vapor pressure and amount evaporated at 140° F. While not exactly the same specifications apply, Grade 18-55 corresponds to the former Grade A, Grade 26-70 to former Grade AA and Grade 30-70 to former Grade BB.

*All low vapor pressure grades have minimum recovery of 96 (natural gasoline method).

Kerosenes

(All kerosenes water white)

	Oct. 18		Oct. 11	
OKLAHOMA (Group 3)—				
41-43	.03⅜	.03½	.03¼	
42-44	.03½	.03⅝	.03⅜	.03½
NORTH TEXAS—				
40-41	.03⅛	.03¼	.03	.03⅛
41-43	.03¼		.03⅛	.03¼
†NORTH LOUISIANA—				
41-43	.04		.03¾	
42-44	.04⅛	.04¼	.04	
†ARKANSAS—				
41-43	.04		.03¾	
PENNSYLVANIA (inland refineries)—				
45	.04⅝	.04¾	.04⅝	
46	.04¾	.04⅞	.04¾	
47	.04¾	.05	.04¾	.05
CHICAGO (Based on Group 3)—				
41-43	.03¼	.03⅜	.03⅛	.03¼
42-44	.03⅜	.03½	.03¼	.03⅜
*CALIFORNIA—				
38-40 high burning test	.04	.04¾	.04	.04¾
NEW YORK (Bayonne, N. J.)—				
41-43	.05½		.05½	
GULF COAST (domestic)—				
41-43 water white	.04¼	.04½	.04½	.04¾

*For Pacific Coast consumption.

†For Arkansas, Louisiana and Mississippi delivery.

Tractor Fuels*

	Oct. 18		Oct. 11	
OKLAHOMA (Group 3)—				
39-40 prime white	.03⅛	.03¼	.03	.03⅛
38-40 light straw	.03	.03⅛	.02⅞	.03
NORTH TEXAS—				
38-40 light straw	.02⅞		.02¾	
CHICAGO (Based on Group 3)—				
38-40 light straw	.03⅛	.03½	.03	.03⅛
PENNSYLVANIA (inland refineries)—				
41-43 prime white	.04¼		.04¼	

*There are no standard specifications for tractor fuels. Grades commonly sold have flash under 175° F. (open cup) and under 575° F. endpoint and less than .2 per cent sulphur. Tractor fuels are available from all Mid-Continent refining groups at prices in line with the Oklahoma market taking into consideration differentials in freight rates.

Furnace Oils*

	Oct. 18		Oct. 11	
OKLAHOMA (Group 3)—				
32-36 straw	.02⅞		.02¾	
36-38 straw	.03		.02⅞	
38-40 straw	.03¼		.02⅞	.03
39-41 prime	.03¼		.03	.03⅛
NORTH TEXAS—				
38-40 straw	.02⅞	.03⅛	.02⅞	.03⅛
†NORTH LOUISIANA—				
36-40	.03½		.03⅛	.03¼
†ARKANSAS—				
32-36	.03⅛	.03¼	.03	.03⅛
CHICAGO (Based on Group 3)—				
32-36 straw	.02¾	.02⅞	.02⅝	.02¾
38-40 straw	.03	.03⅛	.02⅞	.03
PENNSYLVANIA (inland refineries)—				
40-41 prime white	.03½		.03½	
NEW YORK (Bayonne, N. J.)—				
32-36	.04		.04	
36-40	.05		.05	
21 (industrial)	.03½		.03½	

*Above prices are for furnace oils of zero cold test under 190° F. flash and good odor.

†For Arkansas, Louisiana and Mississippi delivery.

Gas Oil, Diesel Oil and Fuel Oil

Gas oil (G.O.) quoted per gallon basis; Diesel oil and fuel oil per barrel.

	Oct. 18		Oct. 11	
OKLAHOMA (Group 3)—				
32-36 (G.O.) cracking stock	.01⅞	.02	.01¾	.02
U.G.I. (G.O.)	.02	.02¼	.01¾	.02⅛
32-36 zero to 15 (G.O.) high flash	.02⅝	.02¾	.02¼	.02½
28-30, zero to 10	.90	1.00	.80	.82½
26-30, zero to 10	.75	.80	.72½	.75
24-26	.55	.60	.52½	.57½
20-22	.50	.55	.50	
16-20	.45	.50	.45	.47½
Below 16	.40	.45	.40	.45
NORTH TEXAS—				
32-36 (G.O.) industrial	.01¾	.01⅞	.01¾	
22-26	.40	.45	.40	.45
Below 20	.37½	.40	.35	.40
NORTH LOUISIANA—				
32-36 (G.O.) zero	.02¾		.02½	.02⅝
14-16	.40	.45	.37½	.40
†ARKANSAS—				
32-36 (G.O.) zero high flash	.02¾		.02½	.02⅝
14-16	.40	.45	.37½	.40
CHICAGO (Based on Group 3)—				
32-36 (G.O.) industrial	.01⅞	.02	.01¾	.01⅞
28-30 (zero)	.90	1.00	.80	.90
22-26	.65	.70	.60	.65
18-22	.50	.55	.47½	.50
Below 18	.40	.45	.35	.40
PENNSYLVANIA (inland refineries)—				
36-40	.03¼	.03½	.03¼	.03½

Note—Fuel oils of more than 40 cold test generally 5 to 10 cents per barrel less in all areas than shown in above tables.

†For Arkansas, Louisiana and Mississippi delivery.

CALIFORNIA—				
30-34 (G.O.) per bbl.	.75	.85	.75	.85
27 plus Diesel	.75	.85	.75	.85
15-19 bunker (at tidewater)	.55	.65	.55	.65
15-19 (cargo lots)	.50	.60	.50	.60
15-19 (tank car)	.40	.60	.40	.60
GULF COAST—				
28-30 (G.O.)	.03¼	.03⅜	.03¼	.03⅜
28-30 Diesel	1.50		1.50	
Bunker C (bulk cargoes)	.45	.50	.45	.50
Bunker C (bunkers)	.60		.60	
NEW YORK (Bayonne, N. J.)—				
28 plus (G.O.)	.04		.04	
*28-30 Diesel	1.65		1.65	
26-30 Diesel (tank cars)	.04		.04	
†Bunker C	.75		.75	

*Lighterage 6½ cents per barrel.

†Lighterage 5 cents per barrel.

Petroleum Coke*

Prices per ton f.o.b. refineries in Chicago area.

Breeze (screenings)	5.00		4.50	5.00
Still runs	5.00	6.00	4.75	5.00
Lump and egg	7.50		7.50	

*Refineries will absorb freight to 80 cents a ton.

Neutral Oils

(Viscosity at 100° F. and color)

	Oct. 18		Oct. 11	
OKLAHOMA (Group 3)—				
Zero to 10 Cold Test:				
150-3	.06¼	.06½	.06¼	.06½
180-3	.07½	.07¾	.07½	.07¾
180-4	.07	.07¼	.07	.07¼
200-3	.08¼	.08½	.08¼	.08½
200-4	.08	.08¼	.08	.08¼
240-3	.09¾	.10	.09¾	.10
240-4	.09¼	.09½	.09¼	.09½
280-3	.11¼	.11½	.11¼	.11½
280-4	.10¼	.10½	.10¼	.10½

300-3.5	.11¾	.12	.11¾	.12
350-3.5	.12¼	.12½	.12¼	.12½
400-4	.12¾	.13	.12¾	.13
500-4.5	.13¼	.13½	.13¼	.13½
100-2 paraffin oil	.04¼	.04½	.04¼	.04½
15-30 Cold Test:				
200-3	.07¾	.08	.07¾	.08
200-4	.07½	.07¾	.07½	.07¾
240-3	.09¼	.09½	.09¼	.09½
240-4	.08¾	.09	.08¾	.09
280-3	.10¾	.11	.10¾	.11
280-4	.09¾	.10	.09¾	.10
PENNSYLVANIA—				
150 vis., No. 3, 400-405:				
Zero pour test	.13½	.14	.13½	.15
10 pour test	.12½	.13	.12½	.14
15 pour test	.10½	.11	.10½	.12
25 pour test	.10		.10	
30 pour test	.09¾		.09¾	
180 vis., No. 3, 25 pour test	.13	.13½	.13	.14
200 vis., No. 3:				
Zero pour test	.20	.21	.20	.21
10 pour test	.18½	.19	.18½	.19
15 pour test	.17½		.17	.18
25 pour test	.15	.15½	.15½	.16½
30 pour test	.15		.15½	.16
GULF COAST—				
Pale Oils:				
100-2-2½	.05	.05½	.05	
200-3	.06⅜	.06⅝	.06¼	.06½
300-3	.06¾	.07¼	.06¾	.07
500-3½	.08¼	.08¾	.08	.08½
750-3½	.09¼	.09¾	.09	.09½
1,200-3½	.10¾	.11	.10½	.10¾
2,000-4	.12¼	.12¾	.12	.12½
Red Oils:				
200-5-6	.05¼	.05½	.05	.05¼
300-5-6	.05¾	.06	.05½	.05¾
500-5-6	.07	.07¼	.06¾	.07
1,200-5-6	.09¾	.10	.09½	.10
2,000-6 plus	.11¼	.11¾	.11	.11½
CALIFORNIA—				
Pale Oils:				
100-2½-3	.08	.08¼	.07¾	.08
200-2½-3	.08¼	.08¾	.07¾	.08
300-3-3½	.09	.09½	.08½	.08½
350-3-4	.09½	.09¾	.08¾	.09
400-3-4	.09¾	.10	.09¼	.09¾
450-3-4	.10	.10½	.09¾	.10
550-3-4	.11	.12	.10¼	.11
Red Oils:				
200-4½-5	.07¼	.07½	.07	.07¼
300-5-6	.07½	.08	.07½	.07¾
350-5-6	.08	.08¼	.07¾	.08
400-5-6	.08¼	.08½	.08	.08¼
450-5-6	.08¾	.09	.08¼	.08½
500-5-6	.09	.09¼	.08½	.08¾
600-5-6½	.09¼	.09½	.08¾	.09
700-6½ plus	.09½	.09¾	.09	.09¼
750-6½ plus	.09¾	.10	.09	.09½
900-6½ plus	.12½	.14	.12	.13½

Bright and Steam Refined Stocks

OKLAHOMA (Group 3)—	Oct. 18		Oct. 11	
630 light green	.07¾	.08	.07¾	.08
600 light green S.R.	.05	.06	.05	.06
600 dark green S.R.	.04	.04½	.04	.04½
Bright Stocks:				
190-200 D	.18		.18	
150-160 D, 0-10	.17		.17	
150-160 D, 10-25	.16½		.16½	
150-160 D, 25-40	.16		.16	
150-160 E	.16		.16	
PENNSYLVANIA—				
600 S.R.	.11¼	.11¾	.12	.12½
650 S.R.	.13½	.14½	.14	.15
600 Pennsylvania flash	.14¾	.15¼	.15¼	.16
630 D filtered	.20	.20½	.20¼	.21
600 E filtered	.15	.15¼	.15¼	.15½
Pennsylvania Grade bright stock:				
Bright Stock, No. 8 color, 145-50 vis.				
210-540-550 flash:				
10 pour test	.24	.25	.24	.25
15 pour test	.22	.23	.22	.23
25 pour test	.20	.21	.20	.21

Wax and Petrolatum

(Prices per pound)

OKLAHOMA (Group 3)—	Oct. 18		Oct. 11	
124-126 white crude scale	.01¾	.01⅞	.01¾	
PENNSYLVANIA—				
122-124	.01⅞	.02	.01⅞	.02
124-126	.02		.02	
NEW YORK (Bayonne, N. J.)—				
Refined Wax:				
120-122	.02⅝		.02⅝	
125-127	.02⅞		.02⅞	
130-132	.03½		.03½	
133-135	.04½		.04½	
135-137	.04¼		.04¼	
Petrolatum in barrels in carload lots:				
Dark green	.01¾		.01¾	
Amber	.02⅛		.02⅛	
Extra amber	.02½		.02½	
Cream	.04⅝		.04⅝	
Lily white	.05½		.05½	
Snow white	.06½		.06½	

Export Prices

GASOLINE

GULF COAST—	Oct. 18		Oct. 11	
U. S. Motor	.04¼	.04½	.04¼	.04½
60-62 400	.04¼	.04½	.04¼	.04½
61-63 390	.04⅜	.04½	.04⅜	.04½
64-66 375	.04½	.04¾	.04½	.04¾
LOS ANGELES, CALIF.—				
U. S. Motor, 53-55 437 e.p.	.03¾	.04¼	.03¾	.04¼
U. S. Motor, 65 octane num.	.05		.05	
U. S. Motor, 67 octane num.	.05¼		.05¼	
U. S. Motor, 69 octane num.	.05½		.05½	
58-60 400 endpoint gasoline	.04¼	.05	.04¼	.05

KEROSENE

GULF COAST—				
41-43 prime white	.04⅜	.04½	.04⅜	.04½
41 water white	.04½		.04½	
LOS ANGELES, CALIF.—				
41-43 water white	.03¾	.04¼	.03¾	.04¼

LUBRICANTS

NEW YORK (f.a.s.) in bbls.)—				
600 filtered	.23		.23	
600 Warren E	.20½		.20½	
600 S.R. unfiltered	.19½		.20	
650 S.R. unfiltered	.21½		.22½	
600 flash S.R.	.22½		.23½	
630 flash S.R.	.27½		.28½	
Bright stock, No. 8 color	.27		.27	
Bright stock, No. 6½ color, dil.	.26½		.26½	

NEUTRAL OILS

NEW YORK—Pale Engine Oil, Bulk (vis. at 100):				
230-3¾	.10	.10¼	.10	.10¼
180-3¼	.09½	.09¾	.09½	.09¾
100-2¼	.05	.05½	.05½	.06
Red Engine Oil, Bulk (vis. at 100):				
300-6½	.09½	.09¾	.09½	.09¾
250-6	.09	.09¼	.09	.09¼
200-6	.08½		.08¼	.08½

Crude Oil Prices

Oklahoma, Kansas, North and East Central Texas

East Texas (Oct. 15, 1932)* $1.10
East Texas (Oct. 1, 1932)† ..... .98
Corsicana heavy (Oct. 15, 1932)‡ ..... .74
Other fields ..... See gravity table

*Posted by Sun Oil Co., Sinclair Prairie Oil Marketing Co., Magnolia Petroleum Co., Panola Pipe Line Co., The Texas Company, Gulf Pipe Line Co., Toronto Pipe Line Co.
†Posted by Humble Oil & Refining Co., October 1, 1932; posted by Tidal Refining Co. and Atlas Pipe Line Co., April 11, 1932.
‡Magnolia Petroleum Co.

Eastern States

JOSEPH SEEP PURCHASING AGENCY
(Effective October 3, 1932)

Pennsylvania Grade Oil in National Transit Lines (Bradford Field) $1.72
Pennsylvania Grade Oil in Southwest Pennsylvania Lines 1.42
Penna. Grade Oil in Eureka Pipe Line Lines 1.37
Penna Grade Oil in Buckeye Pipe Line Lines 1.22
Corning Grade Oil in Buckeye Pipe Line Co.'s line (Oct. 4, 1932) ..... .85
Ragland Grade Oil in Cumberland Pipe Lines (Kentucky) (Jan. 10, 1931) ..... .60

PENNZOIL CO.
(Effective October 3, 1932)

Pennsylvania Grade Oil in National Transit Lines:
Group A $1.67
Includes Cochran, Franklin, Hamilton and Doolittle districts.
Group B 1.66
Includes Titusville district.
Group C 1.65
Includes Turkey and Tidiout districts.
Group D 1.64
Includes Bear Creek and Porkey districts.
Group E 1.62
Includes Eidenau, Bull Creek, Rough Run, Carbon, Dipner, Bredin, McJunkin, Jameson, Kennerdell, Emlenton, Tiona, Lacy and Kinzua districts.
Price depends on length of pipe line haul to plant at Oil City.

TIDE WATER PIPE CO.
(Effective October 3, 1932)

Bradford, Pa. $1.72
Allegany, N. Y. 1.72

PURE OIL CO.
(Effective October 3, 1932)

Cabin Creek, W. Va. $1.37
Bradford Hollow, W. Va. 1.37
Kelly's Creek, W. Va. 1.37

West Texas

Iatan and Westbrook..Same as North Texas Crane, Upton, Crockett, Howard, Glasscock, Mitchell, Ector, Winkler and Pecos counties ..... See note below
Lea County, New Mexico ..... (See Rocky Mountain States)
Toborg, Pecos County* ..... $ .65

Note—Effective October 15, 1932, The Texas Company, Magnolia Petroleum Co., Shell Petroleum Corp. and Gulf Pipe Line Co., 75 cents; effective April 11, 1932, Humble Oil & Refining Co. and Stanolind Oil & Gas Co., 65 cents.
*Shell Petroleum Corp., effective October 15, 1932.

Texas Panhandle

Gray County, Wheeler County and Carson-Hutchinson Counties.... See gravity table

Rocky Mountain States

OHIO OIL CO.-MIDWEST REFINING CO.
Iles, light (Aug. 24, 1931) ..... $ .75
Iles, heavy (Aug. 24, 1931) ..... .53
Fort Collins (Apr. 11, 1932) ..... .86
Florence (Apr. 11, 1932) ..... .80
Wellington (Apr. 11, 1932) ..... .76
Greasewood Dome, Colo. (Apr. 11, 1932) 1.00
Dutton Creek, Wyo. (Apr. 11, 1932) ..... .82
Rock Creek, Wyo. (June 1, 1932) ..... .90
Frannie, light (Nov. 3, 1931) ..... .61
Frannie, heavy (Nov. 3, 1931) ..... .51
Salt Creek ..... See Stanolind Mid-Continent price schedule
LaBarge ..... Mid-Continent gravity scale
Big Muddy (Apr. 11, 1932) ..... .98
Grass Creek (June 1, 1932) 1.10
Elk Basin (June 1, 1932) 1.10
Lance Creek (Apr. 11, 1932) 1.15
Poison Spider (Mar. 5, 1931) ..... .70
Notches (Mar. 14, 1927) ..... .65
Hudson (June 2, 1931) ..... .65
Lander (Mar. 5, 1931) ..... .40
Rex Lake (Feb. 22, 1930) 1.10
Osage (Apr. 15, 1931) ..... .98
Lost Soldier (Apr. 12, 1932) ..... .80
Hamilton Dome (Nov. 3, 1931) ..... .45
Greybull (Apr. 11, 1932) 1.20
Cat Creek (Apr. 11, 1932) 1.20
Pondera (Nov. 3, 1931) ..... .90
Sunburst, Mont. (Apr. 11, 1932) 1.05
Hogback, N. Mex. (Aug. 24, 1931) ..... .80
Border, Mont. 1.55
Red Coulee, Alberta 1.55
Lea County, N. Mex. ..... See note below
Maljamar (Apr. 11, 1932) ..... .60
Artesia-Jackson (Apr. 11, 1932) ..... .65

Note—Salt Creek, Cat Creek, Dry Creek, Dallas-Derby, Hudson, Greybull, Hogback, and Iles by Midwest Refining Co. and remainder by Ohio Oil Co. Both companies posted Grass Creek light and Elk Basin. Lost Soldier posted by Producers & Refiners Corp. Artesia, Jackson and Maljamar posted by Continental Oil Co. Border and Red Coulee posted by Imperial Refining Co. Lea County, effective October 15, The Texas Company and Shell Petroleum Corp., 75 cents; effective April 11, 1932, Humble Oil & Refining Co., 65 cents. Fort Collins, Wellington, Orchard, Florence, Rattlesnake and Table Mesa by Continental Oil Co. Osage posted by Arro Oil & Refining Co.

Gulf Coast

Grade A and Grade B specifications discontinued by leading buyers ..... See gravity table
Jennings, La. (Apr. 11, 1932)* ..... $ .75
Lockport, La. ..... See Gulf Coast gravity table
Refugio, light ..... See gravity table
Refugio, heavy (Apr. 11, 1932)‡ ..... .80
Markham (Oct. 15, 1932)§ ..... See Gulf Coast gravity schedule
High Island (Apr. 11, 1932)¶ ..... See Gulf Coast gravity schedule

*Gulf Refining Co. ‡Humble Oil & Refining Co. §The Texas Company. ¶Yount Lee Pipe Line Co.

North Louisiana and Arkansas

Smackover, Ark. (all grades) ..... See note below
Urania, La. (Oct. 15, 1932) ..... $ .70

(Continued on Next Page)

Crude Oil Gravity Table

Degrees gravity—	1 Kansas, Oklahoma, North Texas, East Central and Central Texas	2 Kansas, Oklahoma, North Texas, East Central Texas and Central Texas	3 North Louisiana and Arkansas	4 North Louisiana and Arkansas	5 Hutchinson, Carson and Moore Counties, Texas	6 Gray County, Texas	7 Hutchinson, Carson and Moore Counties, Texas	8 Gray County, Texas	9 Gulf Coast Texas and Louisiana	10 Gulf Coast Texas and Louisiana	11 Cameron Meadows, Louisiana	12 Salt Creek and La Barge, Wyoming
Below 25	....	....	$ 80	$ .68	....	....	....	....	$ 90	$ 80	$ 80	....
25-25.9	....	....	.82	.70	....	....	....	....	.91	.81	.81	....
26-26.9	....	....	.84	.72	....	....	....	....	.92	.82	.82	....
27-27.9	....	....	.86	.74	....	....	....	....	.93	.83	.83	....
28-28.9	....	....	.88	.76	....	....	....	....	.94	.84	.84	....
Below 29	$ .88	$ .76	....	....	....	....	....	....	....	....	....	$ .76
29-29.9	.90	.78	.90	.78	$ .65	$ .77	....	....	.95	.85	.85	.78
30-30.9	.92	.80	.92	.80	.67	.79	....	....	.96	.86	.86	.80
31-31.9	.94	.82	.94	.82	.69	.81	....	....	.97	.87	.87	.82
32-32.9	.96	.84	.96	.84	.71	.83	....	....	.98	.88	.88	.84
33-33.9	.98	.86	.98	.86	.73	.85	....	....	.99	.89	.89	.86
34-34.9	1.00	.88	1.00	.88	.75	.87	$ .66	$ .76	1.00	.90	.90	.88
35-35.9	1.02	.90	1.02	.90	.77	.89	.68	.78	1.01	.91	.91	.90
36-36.9	1.04	.92	1.04	.92	.79	.91	.70	.80	1.02	.92	.92	.92
37-37.9	1.06	.94	1.06	.94	.81	.93	.72	.82	1.04	.94	.94	.94
38-38.9	1.08	.96	1.08	.96	.83	.95	.74	.84	1.06	.96	.96	.94
39-39.9	1.10	.98	1.10	.98	.85	.97	.76	.86	1.08	.98	.98	.94
40 and over	1.12	1.12	1.12	1.00	.87	.99	.78	.88	1.10	1.00	1.00	.94

Column 1—Effective October 15, in Kansas, Oklahoma, North Texas, East Central Texas and Central Texas by Sinclair Prairie Oil Marketing Co.; in Oklahoma, North Texas, East Central Texas and Central Texas by Magnolia Petroleum Co. (Magnolia's schedule begins below 28 degrees, 79 cents; 28-28.9 degrees, 88 cents, with 2 cents added for each degree upward to 40 and over at $1.12); in Kansas, Oklahoma and North Texas by Continental Oil Co.; in Oklahoma and North and Central Texas by The Texas Company; in Kansas and Oklahoma by Standish Oil Co., Empire Pipe Line Co., Shell Petroleum Corp., Pure Oil Co., Gypsy Oil Co., National Refining Co.; in Oklahoma by Barnsdall Refineries, Inc., Deep Rock Oil & Refining Co., Producers Oil Co.; in North and Central Texas by the Gulf Pipe Line Co.; in Kansas by the Skelly Oil Co., Vickers Refining Co., White Eagle Oil Corp., Kanotex Refining Co.

Column 2—Effective April 11, in Kansas, Oklahoma and North Central Texas by the Stanolind Crude Oil Purchasing Co.; in Kansas and Oklahoma by Carter Oil Co.; in East Central, Central and North Texas by the Humble Oil & Refining Co.; in Oklahoma by Mid-Continent Petroleum Corp., Champlin Refining Co., Eason Oil Co., Pepper Gasoline Co.; in Kansas by Derby Oil Co.

Column 3—Effective October 15, by The Texas Company, Louisiana Oil Refining Co. and Magnolia Petroleum Co., as per schedule above and Gulf Refining Co., whose schedule begins at below 29 gravity, 88 cents.

Column 4—Effective April 11, Standard Oil Co. of Louisiana and Stanolind Oil & Gas Co.

Columns 5 and 8—Effective October 15, Phil Tex Oil Co., as per above schedules, The Texas Company and Magnolia Petroleum Co. Texas and Magnolia schedules begin at below 35 gravity at 87 cents in Gray County and below 35 gravity at 75 cents in Hutchinson and Carson Counties.

Columns 7 and 8—Effective April 11, Humble Oil & Refining Co.

Column 9—Effective October 15, Sun Oil Co., Sinclair Prairie Oil Co., The Texas Company, Gulf Pipe Line Co., Pure Oil Co., Magnolia Petroleum Co. (in Lockport and Iowa Pools).

Column 10—Effective April 11, Humble Oil & Refining Co.

Column 11—Effective October 15, Magnolia Petroleum Co.

Column 12—Effective April 11, Midwest Refining Co.

(California Crude Oil Prices on Page 30)

TANK WAGON MARKETS

Quotations for gasoline and kerosene in United States, as furnished by the larger marketing concerns, include taxes

October 18, 1932

TAXES

The gasoline quotations given in the following tables include the 1-cent Federal tax as well as state, county and city taxes. The gasoline quoted is the regular or standard grade. In most marketing areas a third or competitive grade is generally available at 1.5 or more cents per gallon under the service station price for the regular grade. Ethyl Gasolines are sold 3 cents above the service station price for the regular grade.

Standard Oil Co. (Indiana)

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax of	tank wagon
Chicago	15.1	15.1	4.0	10.0
Decatur, Ill.	17.6	17.6	4.0	10.1
E. St. Louis	16.9	16.9	4.0	9.3
Joliet	17.6	15.6	4.0	8.6
Peoria	17.6	15.6	4.0	10.1
Quincy	17.4	15.0	4.0	9.9
Davenport, Ia.	17.7	17.0	4.0	10.4
Des Moines	17.7	15.9	4.0	8.0
Keokuk	17.7	17.7	4.0	10.4
Sioux City	17.3	17.3	4.0	10.0
Duluth, Minn.	18.7	18.7	4.0	11.0
Mankato	18.3	18.3	4.0	8.1
Minneapolis	16.4	15.4	4.0	11.0
LaCrosse, Wis.	19.4	19.4	5.0	11.1
Milwaukee	17.3	17.3	5.0	10.0
Madison	18.5	18.5	5.0	10.2
Detroit, Mich.	12.6	12.5	4.0	9.0
Grand Rapids	17.5	16.5	4.0	10.3
Saginaw	16.6	15.6	4.0	10.6
Evansville, Ind.	18.2	18.2	5.0	†13.9
Indianapolis	18.4	18.4	5.0	†14.1
South Bend	18.7	16.7	5.0	†14.4
Fargo, N. D.	20.1	20.1	4.0	13.0
Huron, S. D.	19.5	19.5	5.0	11.8
Sioux Falls	19.0	19.0	5.0	10.0
K. C., Mo.*	15.1	15.1	4.0	8.7
Springfield*	17.0	17.0	4.0	8.6
St. Louis*	13.5	11.0	4.0	7.5
St. Joseph*	15.0	15.0	4.0	7.5
Wichita, Kans.	15.9	14.0	4.0	7.0
Bartlesville, Okla.	15.5	15.0	5.0	8.0

*State tax 2 cents, 1-cent city tax and 1-cent Federal tax.

†Includes 4-cent tax. Buyers of kerosene not used as motor fuel can secure refund of tax.

Effective November 4—New dump discount applicable on all grades of gasoline sold from tank wagon. Any tank wagon customer buying 25 gallons or more at one time will be given 1-cent discount per gallon off tank wagon price at time of delivery. Customers not under contract receive no other discount.

Effective January 1—Discounts on Q.D.A. on 500 gallons or more per month throughout territory; Red Crown Ethyl Gasoline, 3 cents off tank wagon price; Red Crown gasoline, 2½ cents off tank wagon price; Stanolind Blue gasoline, 1 cent off tank wagon price. On deliveries of 75,000 gallons or more each classification allowed 1 cent additional discount.

Discounts on resellers authorized agent's agreement: Same amounts as above except made off service station price instead of tank wagon price.

Stanolind Furnace Oil in Chicago

Effective July 1, 1932, prices f.o.b. Chicago, tank wagon prices: No. 1 (36-40 lt. stw. zero), 100 gallons or more, 6 cents; No. 2 (30-34 stw. zero), 150 gallons or more, 5.50 cents; No. 3 (22-26 zero), 200 gallons or more 4.75 cents; No. 4 (12-16 zero), 400 gallons or more, 4 cents. Viscosity of No. 4, 90-115 at 100° F.

Fuel Oils

Chicago Oil Heat Institute Prices

Spot market prices on 350 gallons or over deliveries, and top prices on contracts, respectively: 38-40, 6½ cents and 8 cents; 32-34, 6 cents and 7½ cents; 28-30, 5¾ cents and 6¾ cents; 24-26, 4½ cents and 5½ cents; 18-22, 4¼ cents and 5¼ cents. On deliveries of less than 350 gallons the spot price is one-half cent higher.

Southwestern District

MAGNOLIA PETROLEUM CO.

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax of	tank wagon
Dallas, Tex.	13.5	15.0	5.0	7.0
Fort Worth	13.5	15.0	5.0	9.0
Houston	13.5	16.0	5.0	8.0
San Antonio	13.5	16.0	5.0	9.0
El Paso	15.0	17.0	5.0	11.0
Texarkana	*16.0	16.0	5.0	†11.0
Muskogee, Okla.	11.5	14.0	5.0	8.0
Okla. City	12.5	15.0	5.0	8.0
Tulsa	10.5	13.0	5.0	8.0
Ft. Smith, Ark.	*14.5	*14.5	7.0	†9.0
Little Rock	*16.5	*16.5	7.0	†9.0

*Less 2½ cents to dealers. †Less 2 cents to dealers.

Southern District

STANDARD OIL CO. (KENTUCKY)

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax of	tank wagon
Atlanta, Ga.	21.0	21.0	7.0	11.0
Augusta	17.5	17.5	7.0	11.0
Macon	21.0	21.0	7.0	12.0
Savannah	19.0	19.0	7.0	12.5
Birm'ham, Ala.	20.0	20.0	7.0	11.0
Mobile	20.0	20.0	7.0	10.0
Montgomery	21.0	21.0	7.0	13.5
Jackson, Miss.	18.0	18.0	7.0	10.0
Vicksburg	18.5	18.5	7.0	10.5
Jack'ville, Fla.	17.0	17.0	8.0	12.0
Miami	16.0	16.0	8.0	12.5
Pensacola	19.0	19.0	8.0	11.5
Tampa	16.0	16.0	8.0	13.0
Lexington, Ky.	17.5	17.5	6.0	10.5
Covington	18.0	18.0	6.0	10.5
Louisville	16.0	16.0	6.0	9.0
Paducah	18.0	18.0	6.0	8.0

A third grade "Kyso Green" is sold at a price generally 2 cents below the price on the regular grade.

In addition to the state tax of 4 cents on gasoline, Montgomery has city and county tax of 2 cents on gasoline and one-half cent on kerosene. Kerosene prices in Georgia include 1-cent tax. In Florida, an inspection fee of 0.125 cent; in Alabama, an inspection fee of one-half cent on kerosene and one-fortieth cent on gasoline. To Pensacola, Montgomery and Birmingham state taxes add 1-cent tax. To Mobile state tax add 1-cent city tax. Dealers receive discount of 3 cents off tank wagon price throughout territory.

Rocky Mountain District

CONTINENTAL OIL CO.

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax of	tank wagon
Denver, Colo.	16.0	19.0	5.0	12.5
Pueblo	16.0	19.0	5.0	12.5
Grand Jctn.	20.0	23.0	5.0	14.5
Casper, Wyo.	17.0	20.0	5.0	10.0
Cheyenne	16.0	19.0	5.0	11.5
Butte, Mont.	20.0	23.0	6.0	17.0
Billings	23.0	26.0	6.0	15.5
Great Falls	23.0	26.0	6.0	17.0
Helena	22.0	25.0	6.0	17.0
Salt Lake, Utah	18.0	21.0	5.0	16.0
Albu'que, N. M.	16.0	19.0	*7.0	10.0
Boise, Idaho	22.5	25.5	6.0	18.0
Twin Falls	22.5	25.5	6.0	18.0

*One-cent city tax.

Central South District

STANDARD OIL CO. (LOUISIANA)

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax of	tank wagon
N. Orleans, La.	17.5	17.5	*7.0	†11.0
Baton Rouge	16.0	16.0	6.0	†10.0
Alexandria	16.5	16.5	*7.0	†10.0
Lafayette	17.0	17.0	*7.0	†10.0
Lake Charles	17.5	17.5	*7.0	†10.0
Shreveport	15.5	15.5	6.0	†10.0
Knoxville, Tenn.	20.0	20.0	8.0	11.5
Memphis	15.0	15.0	8.0	9.0
Chattanooga	19.5	19.5	8.0	11.5
Nashville	19.5	19.5	8.0	11.0
Bristol	19.0	19.0	8.0	12.0
Lt. Rock, Ark.	17.5	17.5	7.0	9.0

*Includes city tax of 1 cent. †Louisiana kerosene prices include 1-cent state tax. New Orleans kerosene price also includes 1-cent city tax.

Two-cent discount off kerosene tank wagon price and 2½ cents off gasoline tank wagon price to dealer and commercial accounts.

Ohio

STANDARD OIL CO. (OHIO)*

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax of	tank wagon
Ohio points	17.0	17.5	5.0	*12.0

*Two cents off on gasoline tank wagon to dealers and commercial accounts; 2½ cents off tank wagon on kerosene to dealers.

Nebraska

STANDARD OIL CO. (NEBRASKA)

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax of	tank wagon
Omaha	16.9	17.9	5.0	10.25
McCook	19.0	19.0	5.0	11.75
Norfolk	18.75	18.75	5.0	10.75
N. Platte	19.0	19.0	5.0	11.5
Scottsbluff	19.0	19.0	5.0	11.25

Note—Dealers' discount allowed as follows: Red Crown Ethyl, 3 cents off station price; Red Crown, 2½ cents off normal service station price; Nebraska Blue (third grade), 1 cent off normal service station price.

New York and Part of New England District

STANDARD OIL CO. (NEW YORK)

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax of	tank wagon
Albany, N. Y.	14.5	15.5	4.0	9.0
New York	15.0	15.0	4.0	9.5
Buffalo	15.5	16.5	4.0	9.0
Rochester	15.5	16.5	4.0	9.0
Syracuse	15.5	16.5	4.0	9.5
Boston, Mass.	14.0	15.0	4.0	8.0
Augusta, Me.	17.0	18.0	4.0	9.0
Manch'tr, N. H.	17.0	18.0	5.0	8.0
Burlington, Vt.	16.5	17.5	5.0	8.5

Pennsylvania-Delaware and Part of New England

ATLANTIC REFINING CO.

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax of	tank wagon
Pittsburgh, Pa.	15.5	16.5	4.0	10.0
Philadelphia	15.0	16.0	4.0	10.0
Scranton	15.5	16.5	4.0	10.0
Allentown	15.5	16.5	4.0	10.0
Altoona	15.5	16.5	4.0	10.0
Erie	15.5	16.5	4.0	10.0
Dover, Del.	15.5	16.5	4.0	10.0
Wilmington	15.5	16.5	4.0	10.0
Springf'd, Mass.	15.0	16.0	4.0	8.0
Worcester	15.0	16.0	4.0	8.0
Boston	14.0	15.0	4.0	8.0
Providence, R.I.	13.0	14.0	3.0	8.0
Hartford, Conn.	14.0	15.0	3.0	8.0
New Haven	14.0	15.0	3.0	8.0

Atlantic Coast District

STANDARD OIL CO. (NEW JERSEY)

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax of	tank wagon
Atl'tic City, N.J.	14.7	15.7	4.0	11.2
Newark	14.0	15.0	4.0	8.5
Annapolis, Md.	15.3	16.3	5.0	10.0
Baltimore	14.7	15.7	5.0	7.0
Cumberland	16.2	17.2	5.0	11.7
Wash'g'n, D. C.	13.2	14.2	3.0	10.0
Danville, Va.	17.4	18.4	6.0	11.9
Norfolk	15.8	16.8	6.0	10.3
Petersburg	16.9	17.9	6.0	11.4
Richmond	16.2	17.2	6.0	10.7
Roanoke	17.4	18.4	6.0	11.9
Charles'n, W.Va.	16.1	17.1	5.0	11.6
Parkersburg	14.7	14.7	5.0	10.2
Wheeling	15.7	15.7	5.0	11.2
Charlotte, N. C.	19.0	20.0	7.0	12.5
Hickory	19.2	20.2	7.0	12.7
Mt. Airy	19.3	20.3	7.0	12.8
Raleigh	20.0	20.0	7.0	12.3
Salisbury	19.1	20.1	7.0	12.6
Charleston, S.C.	16.8	17.8	7.0	10.3
Columbia	18.7	19.7	7.0	12.2
Spartanburg	19.0	20.0	7.0	12.5

Two cents per gallon discount off tank wagon price of gasoline to dealers except Washington, D. C., and States of Maryland and New Jersey, where discount is 3 cents. Kerosene 1 cent off tank wagon for 25 gallons or more under contract except New Jersey.

Naphtha

	Tank	
	Wagon	Car
Oleum spirits	10.7	6.23
V.M.P. naphtha	12.7	7.23
Cleaners' naphtha	15.2	9.23
Stanisol	15.2	9.23

Tank wagon prices f.o.b. Chicago January 6, 1932. Each of above prices subject to discount of 1 cent per gallon for 150-gallon lots if covered by contracts.

Pacific Coast Territory

STANDARD OIL CO. OF CALIFORNIA*

	Gasoline			Kero.
	Tank truck†	Posted retail	Incl'ds tax of	tank wagon
Fresno	19.5	18.5	4.0	17.0
San Francisco	19.0	18.0	4.0	15.5
Los Angeles	18.5	17.5	4.0	15.5
Reno, Nev.	23.0	22.0	5.0	19.0
Portland, Ore.	20.0	19.0	5.0	16.5
Seattle, Wash.	22.0	21.0	6.0	16.5
Tacoma	22.0	21.0	6.0	16.5
Spokane	25.5	24.5	6.0	20.5
Phoenix, Ariz.	19.5	21.5	6.0	20.5

*Retail prices posted by Standard Stations, Inc., a subsidiary.

†Above prices are at company's plant or depots as company does not operate stations. A 4-cent per gallon discount is given dealers and customers taking tank wagon lots except in Phoenix where the discount is 1 cent.

TANK WAGON CHANGES

Standard Oil Co. (Indiana) October 16 increased the service station price of gasoline 2 cents to 17.6 cents in Decatur, Ill.

Standard Oil Co. (New Jersey) October 8 reduced the station price 1 cent to 14.7 cents in Parkersburg, W. Va.

Standard Oil Co. (Kentucky) October 10 increased the tank wagon and station price in Birmingham, Ala., 1 cent to 20 cents, October 11 it increased tank wagon and station price in Jacksonville, Fla., 2 cents to 17 cents and on October 13 increased the tank wagon kerosene price 2 cents to 12 cents. On the same date it advanced the price of kerosene in Mobile.

(Continued on Page 32)

CRUDE OIL PRICE CHANGES

An account of the advances in crude oil market prices effective on October 15 in Kansas, Oklahoma, Texas, Southeastern New Mexico, Louisiana and Arkansas is given on Page 9. The Stanolind Crude Oil Purchasing Co., Humble Oil & Refining Co., Carter Oil Co. and some others did not meet the new prices.

Crude Oil Prices

(Continued from Preceding Page)

East El Dorado, Ark. (Oct. 15, 1932) .75
Stephens, Ark., below 29° (Apr. 12, 1932) .61
Stephens, Ark., 29° and above (Apr. 12, 1932) .64
Other fields ..... See gravity table

Note—Smackover, all grades, effective October 15, 1932, The Texas Company, Magnolia Petroleum Co., Louisiana Oil & Refining Co., Gulf Refining Co. of Louisiana, 75 cents; effective April 11, 1932, Standard Oil Co. of Louisiana, 60 cents. Urania posted by H. L. Hunt, Inc., and Louisiana Oil & Refining Co. East El Dorado posted by Magnolia Petroleum Co. and Gulf Refining Co. Stephens, Ark., posted by Louisiana Oil & Refining Co. and Atlantic Oil Producing Co.

South Central and Southwest Texas

Darst Creek ..... See note below
Luling (Oct. 15, 1932)* ..... $ .74
Mirando (Apr. 1, 1932)* ..... .90
Pettus (Apr. 11, 1932)† 1.00
Salt Flat ..... See note below
Thrall‡ .....
Lytton Springs (Lockhart) (Oct. 15, 1932)* 1.00
Dobrowolski§ .....
Same as Mid-Continent gravity scale up to and including 38-38.9°
Somerset‖ .....
Same as Mid-Continent gravity scale up to and including 38-38.9°

Note—Darst Creek, effective October 15, 1932, Magnolia Petroleum Co., The Texas Company and Gulf Pipe Line Co., 85 cents; effective April 11, 1932, Humble Oil & Refining Co., 75 cents. Salt Flat, effective October 15, 1932, Magnolia Petroleum Co. and Shell Petroleum Corp., 85 cents; effective April 11, 1932, Humble Oil & Refining Co. 75 cents. Humble Oil & Refining Co. posted 80 cents for Mirando crude oil on April 11, 1932.

*Posted by Magnolia Petroleum Co.
†Humble Oil & Refining Co.
‡Thrall prices same as North Central Texas, less 19½ cents per cwt. freight.
§Pioneer Oil & Refining Co.
‖Greyburg Oil & Refining Co.

Middle Western States

OHIO OIL CO.
(Effective April 11, 1932)

Lima $1.15
Wooster 1.31
Illinois 1.19
Indiana ..... .79
Princeton 1.19
Plymouth ..... Shut in
Western Kentucky 1.00
Midland, Mich. (July 13, 1932)* ..... .81
Muskegon (July 14, 1932)† .....
.....Mid-Continent gravity scale
Muskegon (June 30, 1932)‡ ..... .91
Somerset, Ky. (Apr. 25, 1932) ..... .85
Hart County, Ky. (June 10, 1932)§ 1.00

*Posted by Pure Oil Co. Old Dutch Refining Co. pays 20 cents per barrel over Pure Oil Co.'s posted price. †Naph-Sal Refining Co. ‡Old Dutch Refining Co. §Posted by Stoll Refining Co. Somerset, Ky., crude purchased by Ashland Refining Co., Ashland, Ky., and delivered through own pipe line.

Mexico

Panuco* $0.44

*F.o.b. ship, based on July transactions and exclusive of production and export taxes and bar dues.

Canada

Ontario (Nov. 3, 1931):
Petrolia* $1.90
Oil Springs* 1.97
Alberta (Apr. 22, 1932):
Turner Valley†:
Crude oil 40-44.9 ..... 1.54
Crude oil 45-45.9 ..... 2.14
Crude oil 50 and above 2.80
Crude naphtha 3.33
Discolored naphtha 3.08

*Imperial Oil, Ltd. †Imperial Oil, Ltd. and Regal Oil & Refining Co.

NEWS FOR SALES DEPARTMENTS

Road Oil Interests Plan Permanent Organization

Plans for a permanent organization in the interest of increased efficiency in the use of oil for highway surfacing were adopted at a road oil congress held in Tulsa Thursday and Friday of last week and attended by 300 refinery superintendents, county commissioners, highway organization officials and persons interested in secondary road construction from all parts of Oklahoma.

Emby Kaye, Tulsa, manager of manufacturing for the Skelly Oil Co., was made chairman of a special committee authorized to work out details of such an organization, which, according to announces plans, is to "more fully develop the possibilities of oil road construction and to establish and more fully exploit the high quality and excellence of road surfaces which can be produced by the proper use of a correct road oil." It is reported to provide a clearing house for the formulation of standard specifications and methods of testing by the co-operation of refinery technologists and responsible state authorities, develop simplified and efficacious methods of testing, prepare facts and further such publicity and promotion efforts as may be justified.

H. Allen, engineer of materials for the Kansas State Highway Department, addressed the meeting on "What Is Road Oil?" Other speakers were W. E. Wood, president of the Oklahoma Good Roads Association; C. E. Swain, Fort Worth, Tex., chief engineer of the thirteenth Federal aid district of the Bureau of Public Roads; W. J. Milburn, president of the Western Oklahoma Chamber of Commerce; Stoner K. McLelland, Tulsa County engineer, and David H. Foster, engineer, Mid-Continent Petroleum Corp., Tulsa. R. W. Leslie and Burrill Ennis, Eldorado, Kans., representing the Skelly Oil Co., presented a paper which discussed asphalt and cut-back asphalt in road repair and construction.

ANSWER FILED IN TAX SUIT

LANSING, Mich., Oct. 17.—Denying that the State of Michigan has a right to $1,600,000 unpaid taxes deducted by the company under the 3 per cent allowance for evaporation, attorneys for the Standard Oil Co. of Indiana have filed a brief with Master in Chancery William S. Sayres. The brief cites Michigan public acts covering the gasoline tax since its inception and in each case points out that the provision covering wastage due to evaporation and loss through transportation was unchanged. "The pretense advanced by the State that it desires to make a test case is untenable," the brief states. "If the State desires to change the 3 per cent evaporation provision in the gasoline tax act, that is a legislative and not a judicial factor."

OIL MEN MEET AT COLLEGE

The Pennsylvania Crude Oil Association held a meeting October 12 and 13 at State College, Pa., seat of Pennsylvania State College, where work of the institution's petroleum laboratory has stirred interest. Meetings of the board of directors, executive committee and technical committee were held at the same time. Technical, sales and merchandising problems were discussed.

STEFFY TO CHICAGO

E. C. Steffy of the Tulsa offices of the Empire Oil & Refining Co. has been transferred to the company's district sales offices in Chicago. He will have charge of this division, taking the place of C. A. Beach who has joined the Great Lakes Coal & Coke Co.

Beauty and Efficiency Are Combined in the World's Largest Service Station

WASHINGTON, D. C., Oct. 17.—Equipped with devices for the scientific and efficient servicing of cars, and designed in harmony with the plans of the Fine Arts Commission, the Capitol "Servicenter" and building of the Standard Oil Co. of New Jersey was opened here last Friday, October 14. The structure, a six-story building of Indiana limestone, stands on the new Constitution Avenue between Second and Third Streets, N. W., fronting on the Capitol grounds.

Within its white walls is what is said to be the largest service station in the world, equipped with every modern device known to service station operation, from an automatic wash track to a squeak detector.

The new building forms part of the extensive beautification program being carried out in the national capital. It is the only privately owned structure on the new avenue, which extends more than 2 miles to the Potomac River and is bordered on each side by government buildings and extensive parking, including The Mall. It is directly behind the site of Standard of New Jersey's former building at Pennsylvania Avenue and Third Street, N. W. As a part of the Washington program, the old building and all other buildings which stand in the two blocks between Constitution Avenue and Pennsylvania Avenue are to be demolished. This will place the new Standard Oil building in open view, with the broad sweep of the enlarged Constitution Avenue and the Capitol grounds before it.

Dedicated to Standard's Founder

Among features which the visitor will note from the outside are the inscriptions at each end of the sixth floor facade. In the one at the east end respect is paid to the founder of Standard Oil. It reads:

"To John D. Rockefeller, founder of this organization, who has contributed so largely to the advancement of education, health, and business—this building is dedicated."

The inscription at the west reads:

"North . . . South . . . East . . . West . . . to the ends of the earth by land, sea, and air, nature's gift of oil speeds man's journey and lessens his daily toil."

No wood is used in the entire building, even the window frames, doors and trim in offices being of metal, as part of the effort to insure the fireproof character of the structure.

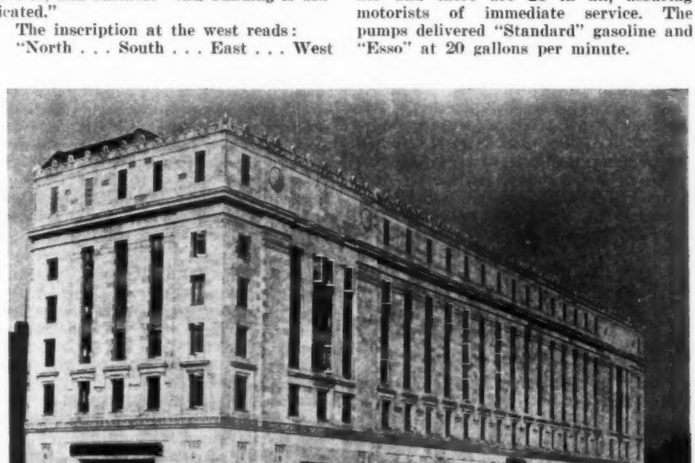
In the allotment of space, the first floor, basement and sixth floor of the building are devoted to the Servicenter. The sub-basement is the mechanical backbone of the building, housing the pumps, boilers, switchboards, oil-burning equipment, air compressors, and other equipment, all 15 feet under sea level. Most of the second floor is used by the Washington branch office of the Standard Oil Co. of New Jersey and the remainder of that floor and all of the third, fourth and fifth floors are to be privately rented.

Six Doors Give Access

On the first floor are the motor, fuel, and oil pump islands, the wash track and lubrication track. Six wide doorways on the Constitution Avenue side and one at each end of the building give easy access to the Servicenter. The motorist on entering finds himself in a large room, 335 feet long, open for the entire length and breadth of the building. Pillars have been eliminated by I-beam construction which includes the largest I-beam ever placed in Washington, measuring 70 feet long, 9 feet high, and weighing 57 tons.

Located at the west end is a mezzanine balcony, which is the customers' lounge, and running along the back of the building is a tile and glass enclosed lubrication and wash layout. Just inside the front entrance six pump islands are located, each completely equipped as a service station, except for greasing facilities.

These islands are fitted with dual pumps manufactured by Gilbert & Barker and there are 21 in all, assuring motorists of immediate service. The pumps delivered "Standard" gasoline and "Esso" at 20 gallons per minute.



"Servicenter" just completed by the Standard Oil Co. of New Jersey and located among Federal Government buildings in Washington, D. C.

Penn Grade Oil Association Adopts More Rigid Rules

OIL CITY, Pa., Oct. 17.—Increased prestige of the association emblem and greater benefits from membership are the advantages of new membership requirements of the Pennsylvania Grade Crude Oil Association, according to T. O. Grisell, secretary.

Under the new plan, membership in the association and license to use its emblem are placed on a yearly basis dating from January 1. Applications for renewal of membership and license in the following year are made in September. This gives the field men of the association time to check personally and report to the association regarding the business ability, ethics and standing of applicants.

This report, together with the application for renewal of membership and license is then carefully gone over by the executive committee. With all facts before them, it is a simple matter to decide whether or not it would be beneficial to all concerned to relicense the applicant for the coming year.

This method of maintaining the membership should do much to protect motorists, for under this plan a member who is found guilty of substituting an inferior oil for pure Pennsylvania will be dropped from membership in the association and his right to use the association emblem withdrawn.

Northwest Association Announces Conventions

The 1933 annual conventions of the two divisions of the Northwest Petroleum Association have been arranged.

The North Dakota division will meet at the Waldorf Hotel, Fargo, N. D., on January 9 and 10, 1933. Local arrangements are being made by W. H. Haggart, R. B. Bergland and W. R. Withnell.

The Minnesota division will meet at the Lowry Hotel, St. Paul, Minn., January 12 and 13, 1933.

CHICAGO TAXES

CHICAGO, Oct. 17.—Taxes paid by Chicago motor car owners up to October 1, this year, total $28,466,000, an increase over the figure for 1931 when automobile levies amounted to $27,585,000. The average tax per motorist in Chicago this year is $51.76, of which $3.91 goes to charity, $29.69 goes to state highway department, $3.35 to Cook County highway department, $4.15 to the Federal Government, $10 to the city and 65 cents to other county highway departments. The figures are compiled by the Chicago Motor Club.

CHAIN STORE LUBRICANTS

CHATHAM, Ontario, Oct. 15.—An innovation in oil marketing in Canada is the handling of lubricating oils by chain stores. Dominion Stores, Ltd., has commenced the sale of lubricants in 6-quart containers, and it is understood that Atlantic & Pacific Tea Co. is planning to take up the same line.

OIL IMPORTS QUESTIONED

CHATHAM, Ontario, Oct. 15.—Recent importations of Soviet crude into Canada formed the subject of questions and requests for documents in the Canadian parliament recently by William Duff, M.P. for Antigonish-Guysboro.

PENNZOIL GETS CONTRACT

CHICAGO, Oct. 17.—Pennzoil Refining Co. has received a contract from United Air Lines for 275,000 gallons of lubricating oil.

NEWS FOR PETROLEUM REFINERS

Better Business in California Lub Oil Reported in Sight

California lub oil prices showed improvement during the past week, although the volume handled was relatively small. Lub oil sales had been at a standstill since June but refiners report an increasing number of inquiries and expect improved conditions later this year. Major companies do not appear interested in the jobbing trade at present as this oil recently has been entering illegitimate channels and has proven a disturbing factor.

Within another month smudge oil prices should show a strengthening tendency. Heretofore the citrus growers have used various grades of fuel, but beginning this year a little better grade will be required. With the winter season approaching, Los Angeles County authorities will make a determined effort to enforce the orchard heater ordinance adopted which became effective March 1, 1932. Similar measures have also been adopted by the boards of supervisors of Riverside, Orange and San Bernardino Counties.

The heater ordinance is designed to abate the smoke nuisance during the period when orchards are heated to prevent damage from frost. Last winter was a rather severe one and the large quantity of oil used resulted in much smoke.

Supervisor Thatcher of Los Angeles County, in explaining the new measure, stated: "The board is the governing body for the entire county and we must consider the entire population and all lines of business which are affected by the new orchard heater ordinance. The supervisors have no desire to work a real hardship on citrus growers but the ordinance, however, will be enforced to the best of the ability of the enforcing bodies. The supervisors are not concerned regarding the type of equipment to meet the requirements of the ordinance. It should be definitely understood that those growers who at this time are using open pots or equipment with no regulatory control must be forced to abate the nuisance as they are a menace to the community."

Work Started on Pressure Distillate Stabilizing Unit

LOS ANGELES, Calif., Oct. 17.—Work has been started on a pressure distillate stabilizing unit for the Wilmington refinery of the Union Oil Co. of California. The contract involves approximately $170,000, according to Reese Taylor, executive vice president of the steel company, and is to be completed within 90 days.

The Foster Wheeler Corp. is handling the engineering work on this contract under the working agreement Consolidated Steel effected last spring whereby it does all the sales and manufacturing for Foster Wheeler in the West.

REFINERY FOR OKLAHOMA CITY

The recently formed Donleon Refining Co. has announced plans for the construction of another refinery at the north end of the Oklahoma City Field. The plant will be a combination topping and cracking unit, with a capacity of 2,000 bbls. daily. It will handle crude from the wells of the Donleon Oil Co., and the company also will be a common purchaser in the field. Leon Melekov is president of the company, C. H. Fox, vice president and W. U. Paul, secretary-treasurer. They are also directors with George E. Cryer, former mayor of Los Angeles, C. B. Warr of Oklahoma City, and Nathan Melekov of Los Angeles.

Commerce Department Issues Statement Showing Oil Imports and Exports

By CHARLES E. KERN
Washington Bureau, The Oil and Gas Journal

WASHINGTON, D. C., Oct. 17.—Origin of imports and destination of exports of petroleum and products in August are shown in a statement issued by the Department of Commerce. Countries which received oil or oil products from this country follow:

Belgium received 68,647 bbls. of gasoline, naphtha and other finished light products, 16,550 bbls. of illuminating oil, 17,017 bbls. of gas and distillates, 18,912 bbls. of red and pale oils, 6,295 bbls. of black oil, 8,525 bbls. of cylinder oil, and 20 bbls. of insulating oils.

Denmark took 60,591 bbls. of illuminating oil.

France received 811,643 bbls. of crude, 335,536 bbls. of gasoline in bulk, 56,326 bbls. of red and pale lubricating oil, 3,720 bbls. of black oil, 20,130 bbls. of cylinder oil, and 3,151 bbls. of insulating oil.

Germany took 67,939 bbls. of gasoline in bulk, 90,207 bbls. of red and pale oil, 154 bbls. of black oil, 23,950 bbls. of cylinder oil, and 92,195 bbls. of insulating oil.

The Irish Free State received 33,587 bbls. of gasoline in bulk, 25,600 bbls. of illuminating oil in bulk.

Italy took 14,607 bbls. of red and pale lubricating oil, 1,451 bbls. of black oil, 33,795 bbls. of cylinder oil, and 9,418 bbls. of insulating oil.

The Netherlands received 95,168 bbls. of gasoline in bulk, 140,472 bbls. of illuminating oil in bulk, 76,377 bbls. of gas and distillate fuel oil, 1,588 bbls. of red and pale oil, 1,709 bbls. of black oil, 2,268 bbls. of cylinder oil.

Norway received 37,618 bbls. of gasoline, 140,472 bbls. of illuminating oil, 7,095 bbls. of gas and distillate.

Spain received 13,263 bbls. of red and pale oil, and 1,889 bbls. of cylinder oil.

Sweden received 3,500 bbls. of gasoline, 14,400 bbls. of kerosene, 5,963 bbls. of gas and distillate fuel oil, 17,476 bbls. of

(Continued on Page 30)

Socony-Vacuum to Adopt 5-Day Week Plan November 1

NEW YORK, Oct. 17.—Effective November 1, operations of the Socony-Vacuum Corp. will be placed on a five-day week schedule, with a corresponding reduction in pay.

The company has more than 30,000 employes in the United States, and as far as possible, job sharing will be put into effect for all employes. Employes earning less than $100 per month will not be affected by the pay cut.

The five-day week, according to Herbert L. Pratt, chairman of the board, is entirely practical and its inauguration will be of some material help in relieving unemployment.

REBUILDS PLANT

On October 3 the Keystone Lubricating Co.'s plant at Twenty-first, Clearfield and Lippincott Streets, Philadelphia, Pa., was burned to the ground and two days later the contract was signed to rebuild on the same site and on the same foundations. H. A. Buzby, president of the company, said the new building and equipment would embody the newest machinery and methods. The rebuilding work is planned so that the plant will be operating while the administrative portions of the structure are still unfinished. Temporary offices of the company are at Twenty-first Street and Allegheny Avenue.

CHEMISTS HEAR DOCTOR EGLOFF

CLEVELAND, Ohio, Oct. 17.—Dr. Gustav Egloff of Universal Oil Products Co., Chicago, spoke before the Cleveland section of the American Chemical Society in the Cleveland Hotel here last Saturday evening on "Modern Motor Fuels." He said straightrun gasoline gives poor performance in the modern automobile engine and that refiners are turning more and more to cracking processes which make synthetic gasoline of the quality needed. Doctor Egloff predicted that the percentage of cracked gasoline to the total gasoline made in this country will continue to increase.

New Cracking Unit Ordered Built in Japanese Refinery

Gasoline Products Co. has entered into a license agreement with the Imperial Japanese Navy for a cracking plant to be installed near Kudamatsu, Japan. Fabrication and assembly of materials will be started immediately at the Jersey City plant of the M. W. Kellogg Co., engineering and licensing agents for Gasoline Products Co. The plant will have a rated capacity of about 1,000 bbls. of topped crude per stream day and will be equipped with a stabilizing unit.

GALLAGHER HEADS RIO GRANDE

LOS ANGELES, Calif., Oct. 17.—Herbert R. Gallagher, president of the Consolidated Oil Corp., a Sinclair property, has been elected president of the Rio Grande Oil Co., which recently was merged with Consolidated. Mr. Gallagher, formerly a resident of California, was for many years vice president of the Shell Oil Co. of California. Charles S. Jones was re-elected executive vice president and president of the Rio Grande's subsidiaries. Other officers are Frank A. Morgan, vice president; M. R. Gross, treasurer and secretary, and J. C. Fincher, assistant treasurer and secretary.

MENTONE TO TAKE MORE OIL

Additional pipe line connections are being made by the Mentone Oil & Refining Co. to take crude from the Loving County Field in West Texas. The new refinery at Mentone, which is the property of the Mentone Refining Co., a subsidiary of the Active Oil Corp. of Chicago, began the manufacture of gasoline from crude supplied from the Phillips lease. Most of the gasoline is shipped direct to Chicago.

CRACKING PLANT IS ORDERED

The Imperial Japanese Navy has ordered a gyro vapor phase cracking plant for the manufacture of high octane gasoline from Alco Products, Inc., a division of the American Locomotive Co. The plant, scheduled for delivery in January, will be fabricated at the company's plant in Dunkirk, N. Y.

Russia Increases Refinery Output in First 8 Months 1932

NEW YORK, Oct. 15.—Crude runs by Russian refineries during the first eight months of 1932 aggregated 14,044,700 tons, as compared with 12,762,000 tons in the comparable months last year. Gasoline yield during the period totaled 1,976,100 tons, against 1,703,100 tons in the same months of 1931, while kerosene output was up from 2,660,200 tons to 2,876,000 tons. Cracked spirit production in the first eight months of the current year was 387,000 tons, as compared with 203,900 tons in the same months of last year.

Crude production in Russia for the first eight months of 1932 was 14,910,000 tons, against 14,541,000 tons in the comparable period last year, with Azneft and Grozneft continuing to account for the greater part of the output.

A total of 535,958 meters of new drilling was reported in the first eight months of 1932, against 513,415 in the comparable months of 1931. Of this total 361,588 meters was in exploitation drilling, with research drilling accounting for 84,807 meters in old fields and 89,563 meters in new fields.

New El Paso Refinery to Get Oil From Ward County

Construction will be started at once on a 1,500-bbl. refinery in El Paso, Tex. Emil Geppelt of the Petroleum Engineering Service Co., Inc., Dallas, and G. M. McNutt of El Paso are constructing the plant, which will operate on Ward County crude. Crude will be transported to El Paso by tank cars from Wickett, to which point the Wickett Pipe Line Co. has contracted to carry the oil from the field in the southern part of the county.

Mr. McNutt has a distributing system and several filling stations in El Paso which will market the refined products made in the plant.

REFINERS WANT RATE PARITY

East Texas independent oil refiners have carried to the Interstate Commerce Commission their demand for rail rate parity with Shreveport refiners. The East Texas Refining Co. and the Taylor Refining Co., Tyler, and the Petroleum Refractionating Co., Bodie, are among the petitioners. F. W. Burford of Dallas, president of the East Texas Refining Co., testified at a hearing conducted by Examiner Mattingly of the commission that present rates do not permit East Texas refiners to compete with those in Shreveport for the business of southeastern states.

NEW STORAGE PLANT

CHATHAM, Ontario, Oct. 15.—Imperial Oil, Ltd., is constructing a new storage and distribution plant at Campbellton, New Brunswick. The plans call for five 500,000-gallon tanks and one 1,000,000-gallon tank. Petroleum products for the new plant will be shipped from the Imperial refinery at Imperoyal, Nova Scotia.

REFINERY UNDER CONSTRUCTION

CHATHAM, Ontario, Oct. 15.—Some 300 men are now employed on the construction of the Shell Oil Co. of Canada refinery at Montreal East, Quebec. The plant will have an initial capacity of 2,500 bbls. a day and will cost approximately $2,000,000.

NATURAL GASOLINE MANUFACTURE

Jobbers Taking an Increasing Volume Natural Gasoline

During the first eight months of this year 30 per cent more natural gasoline has moved direct to jobbers than during the same period a year ago. This is in contrast to the decrease of nearly 30 per cent in the quantity taken by refiners. Although the percentage figures are the same here, it does not mean the volumes are equal for the great bulk of the natural gasoline produced continues to be absorbed by refiners. It does show, however, that manufacturers are finding a market for their production. The following table was prepared by the Western Petroleum Refiners Association.

MID-CONTINENT NATURAL GASOLINE STATISTICS FOR FIRST EIGHT MONTHS OF 1931 AND 1932

(Thousands of gallons)

Production at Natural Gasoline Plants in Mid-Continent

	First 8 mos. 1931	First 8 mos. 1932	Pct. change
Oklahoma City	35,200	52,200	+48.3
Osage County	46,200	31,700	—31.4
Seminole	138,100	78,300	—43.3
Rest of Oklahoma	100,500	95,700	— 4.8
Total Oklahoma	320,000	257,900	—19.4
Total Kansas	22,000	16,600	—24.5
Panhandle	143,100	115,300	—19.4
North Texas	22,500	17,100	—24.0
West Central	78,300	58,100	—25.8
Rest of Texas	48,400	46,400	— 4.1
Total Texas	292,300	236,900	—19.0
Total Louisiana	40,000	32,900	—17.7
Total Arkansas	18,800	13,700	—27.1
Total	693,100	558,000	—19.5

Stocks at Natural Gasoline Plants, Aug. 31

	First 8 mos. 1931	First 8 mos. 1932	Pct. change
Oklahoma	8,368	11,898	+42.2
Kansas	1,303	996	—23.6
Texas	9,021	7,079	—21.5
Louisiana	767	576	—24.9
Arkansas	377	242	—35.8
Total	19,836	20,791	+ 4.8

Shipments From Natural Gasoline Plants

	First 8 mos. 1931	First 8 mos. 1932	Pct. change
Oklahoma	320,117	254,787	—20.4
Kansas	21,644	16,032	—25.9
Texas	291,287	235,826	—19.0
Louisiana	39,972	33,562	—16.0
Arkansas	18,770	13,660	—27.2
Total	691,790	553,867	—19.9

Used by Local Refineries

	First 8 mos. 1931	First 8 mos. 1932	Pct. change
Okla. and Kans.	148,050	123,732	—16.4
Inland Texas	94,710	77,700	—18.0
Coastal Texas	187,488	93,240	—50.3
N. La. and Ark.	31,038	24,192	—22.1
Coastal Louisiana	48,510	30,114	—37.9
Total	509,796	348,978	—31.5

Local Refinery Demand (Receipts)

	First 8 mos. 1931	First 8 mos. 1932	Pct. change
Okla. and Kans.	148,848	123,480	—17.0
Inland Texas	93,870	77,742	—17.2
Coastal Texas	183,456	88,788	—51.6
N. La. and Ark.	30,954	24,066	—22.3
Total	506,016	344,106	—32.0

Composite of Statistics for All Areas in United States

	First 8 mos. 1931	First 8 mos. 1932	Pct. change
Stocks, nat. gaso. plants Aug. 31	30,344	25,888	—14.7
Production at nat. gaso. plants	1,266,800	1,021,100	—19.4
Shipments from nat. gaso. plants	1,260,772	1,022,282	—18.9
Stocks at refineries Aug. 31	104,664	129,108	+23.4
Used by refineries.	988,092	698,502	—29.3
Refinery demand (receipts)	986,832	736,344	—25.4
Demand other than refinery receipts:			
Blended at nat. gaso. plants	4,546	1,063	—76.6
To jobbers, exports, etc.	126,000	164,094	+30.2
Bal., incl. losses	143,394	120,781	—15.8
Total	273,940	285,938	+ 4.4

Awards Given at Twenty-First Annual Meeting of National Safety Council

WASHINGTON, D. C., Oct. 17.—C. L. Hightower, safety director for the Texas Pacific Coal & Oil Co. and well known in the Mid-Continent natural gasoline industry was chosen general chairman of the petroleum division of the National Safety Council in the council's twenty-first annual meeting at Washington, D. C., in the past week. E. R. Alden of the Vacuum Oil Co. was elected vice chairman. The various papers presented at the meeting offered evidence that the work of devising means for preventing accidents has not been lessened by the economic depression and there was as keen an interest displayed in the problems as at any previous meeting.

Other officers elected to serve under Mr. Hightower include the following chairman of the respective committees:

Atlantic division, R. W. Black, Standard Oil Co. (New Jersey), Elizabeth, N. J.; Great Lakes division, J. C. Bernd, Sinclair Refining Co., East Chicago, Ind.; Mid-Continent division, J. C. Young, Tide Water Companies, Tulsa; Gulf division, H. C. Renz, Atlantic Oil Producing Co., Dallas, Tex.; Rocky Mountain division, T. N. Shaw, Midwest Refining Co., Casper, Wyo.; Pacific division, L. F. Knox, General Petroleum Corp., Los Angeles; poster, H. E. Dischinger, Shell Petroleum Corp., St. Louis; engineering, G. O. Lockwood, Empire Companies, Bartlesville, Okla.; publicity, B. V. Osborn, Standard Oil Co. (Indiana), Casper, Wyo.; program, J. L. Risinger, Magnolia Petroleum Petroleum Co., Beaumont, Tex.; statistics, J. W. Myers, Standard Oil Co. (New Jersey), New York; health, Dr. C. M. Aves, Humble Oil & Refining Co., Houston, Tex.; news letter editor, A. W. Breeland, Lone Star Gas Co., Dallas, Tex.

The Empire Oil & Refining Co. was given first honors in Group A for its accident record over the past year. The Standard Oil Co. of California was given second place, having a frequency rate but slightly higher than the Empire.

The detailed results in both the Group A and Group B in the record of accidents in the natural gasoline plants of all members during the past year appears below:

Safety Records of the Various Companies Participating in Natural Gasoline Division

GROUP A:

1. Empire Oil & Refining Co., Bartlesville, Okla.: Five lost-time injuries; 320,267 man hours; 15.612 frequency rate.

2. Standard Oil Co. of California, Standard Gasoline Co., San Francisco, Calif.: Twelve lost-time injuries; 636,696 man hours; 18.847 frequency rate.

GROUP B:

1. The Midwest Refining Co., Casper, Wyo.: No lost-time injuries; 255,278 man hours.

2. General Petroleum Corp. of California, Los Angeles, Calif.: No lost-time injuries; 129,726 man hours.

3. Hope Construction & Refining Co., Pittsburgh, Pa.: No lost-time injuries; 118,676 man hours.

4. The Ohio Oil Co., Mid-Kansas Gas & Oil Co., Findlay, Ohio: No lost-time injuries; 63,024 man hours.

5. Texas-Pacific Coal & Oil Co., Thurber, Tex.; No lost-time injuries; 38,880 man hours.

6. Gulf Companies, Gulf Refining Co. of Louisiana, Houston, Tex.: No lost-time injuries; 33,208 man hours.

High Compression Finds Help in Improved Fuels

Recent improvements in antiknock qualities and the greater volatility of fuels are enabling engineers to take advantage of the benefits of high compression. These advantages have been incorporated in current low priced automobiles and are responsible to a large degree for their performance characteristics. The compression ratio of the standard of a newly advertised engine is 5.8 to 1, and a special head known as the superpower dome is available with a ratio of 7.1 to 1.

Even the standard 5.8 to 1 ratio is above the average and involves design features which are necessary to secure smoothness of operation in spite of the increased energy developed in combustion. Proper forming of the combustion chamber to give the right degree of turbulence or agitation of the charge at the time of ignition and proper temperature control are two vital factors in the design of a high compression engine.

When the owner looks at his temperature gauge and notes that it registers 160 to 180 degrees or somewhere near the center of the "running range," he is satisfied. But, to the engineer this water outlet temperature does not mean anything unless he knows that the water passages about the engine are so designed that there are no hot pockets anywhere which could cause detonation or knocking. The quantity of water around each part must be determined so that there is neither overcooling nor undercooling and as the compressions go up this feature becomes more and more important because hot spots with high compression mean rough engines due to detonation.

Before an engine is released for production the cooling water temperature at every vital point must be known. Thermometers are placed in the water passages at many points and the engine is run under load on the dynamometer, when simultaneous temperature readings can be taken. Control of the water volume and velocity is obtained by properly arranging the pump capacity as well as the form and size of the water passages.

This heat control is one of the many details whose importance has been increased by the trend towards higher compression.

QUEBEC BUTANE PROJECTS

CHATHAM, Ontario, Oct. 15.—Following the establishment of a butane gas plant at Three Rivers, Quebec, plans are on foot to establish similar plants in some of the smaller communities in Ontario and Quebec which at present have no modern gas service.

NO CANADIAN CONVENTION

CHATHAM, Ontario, Oct. 15.—Announcement is made that owing to business conditions, the Natural Gas and Petroleum Association of Canada will not hold any convention this year. Annual conventions of the association have been held since its organization in 1919.

Transportation of Gasoline by Pipe Line Held Taxable

At the time the Treasury Department was seeking information relative to taxing motor fuel and pipe lines the natural gasoline industry asked that a ruling be made with respect to taxing the pipe line transportation of natural gasoline from the plant over relatively long distances to a loading rack or to a refinery. The following decision as outlined by the Internal Revenue Department was made public October 6.

The decisions as set forth by the Bureau of Internal Revenue is as follows: "Regulations 42, Article 30, Basis of Tax. Transportation of gasoline by pipe line, similar to movements which pipe line carriers usually undertake and perform, held taxable under Section 731 of the Revenue Act of 1932.

"Advice is requested whether the tax imposed by Section 731 of the Revenue Act of 1932 applies under the following circumstances:

"The —— company owns and operates a 2-inch pipe line from its gasoline plant to a city approximately 29 miles away. The line connects the gasoline plant and the loading dock at the city and is used exclusively by the —— company in transporting its own product. At the dock, the gasoline is loaded into tank cars and transported to the consignee.

"The movement is not merely local or incidental to the production or refinement of gasoline. It is substantially similar to movements which pipe line carriers usually undertake and perform with respect to delivery service to tank cars through loading racks.

"It is held that the movement of gasoline under the circumstances above set out is taxable under Section 731 of the Revenue Act of 1932."

Section 731 of the Revenue Act on the transportation of oil by pipe lines provides that a tax equivalent to 4 per cent of the amount paid for such transportation must be paid by the person furnishing such transportation.

PLANT IN CONROE FIELD

The Midland Gasoline Corp. is planning construction of a 10,000,000-foot daily capacity casinghead gasoline absorption plant in the Conroe Field, Montgomery County, and has been taking contracts for gas from several producers and lease owners in that field. As soon as sufficient contracts are made for gas to supply the plant construction will be started. Offices of the company are in the Trinity Life Building, Fort Worth.

STANDARD TAKES GAS

North American Oil Consolidated has reached an agreement with the Standard Gasoline Co. whereby the former's wet gas will be processed in the Standard's Los Nietos plant at Kettleman Hills North Dome. Approximately 850,000 feet of gas per day is going into the plant, but so far no arrangement has been perfected for handling the dry fuel.

OHIO BUYS RESERVE PLANT

The Reserve Petroleum Co. has sold its 2,500-gallon absorption gasoline plant in Haynesville, La., and half of its oil production in the North Louisiana Pool to the Ohio Oil Co. The Reserve, headed by Fred Phillips of Tulsa, is the owner of a large volume of acreage in the Mid-Continent.

Department Issues Report on Imports and Exports

(Continued from Page 28)

red and pale oil, 7,152 bbls. of black oil, and 1,248 bbls. of insulating oil.

The United Kingdom received 628,225 bbls. of gasoline, 76,653 bbls. of kerosene, 52,972 bbls. of gas and distillate fuel oil, 71,400 bbls. of residual fuel oil, 87,070 bbls. of red and pale lubricating oil, 16,645 bbls. of black oil, 35,922 bbls. of cylinder oil, and 171,375 bbls. of insulating oil.

Canadian Takings

Canada took 1,876,276 bbls. of crude oil, 265,390 bbls. of gasoline in bulk and 532 bbls. in containers, 4,582 bbls. of kerosene in bulk and 67 bbls. in containers, 113,242 bbls. of gas and distillate fuel oil, 26,868 bbls. of residual fuel oil, 25,572 bbls. of red and pale oil, 239 bbls. of black oil, 6,743 bbls. of cylinder oil, 20,270 bbls. of mineral spirits, and 23,213 bbls. of insulating oil.

Panama took 30,509 bbls. of gasoline, 130,833 bbls. of gas and distillate fuel oil, and 35,049 bbls. of residual fuel oil.

Mexico took 48,792 bbls. of gasoline, and 45,545 bbls. of both kinds of fuel oil.

Cuba received 5,556 bbls. of gasoline.

The Netherland West Indies received 152,370 bbls. of gasoline, and 92,041 bbls. of kerosene.

The Argentine received 3,500 bbls. of gasoline, 6,901 bbls. of kerosene, 7,218 bbls. of red and pale lubricating oil, 3,166 bbls. of cylinder oil.

Brazil received 11,506 bbls. of gasoline in containers, 15,463 bbls. of kerosene in containers, 3,921 bbls. of fuel oil, 1,602 bbls. of red and pale oil, 1,189 bbls. of cylinder oil.

Chile received 60,072 bbls. of fuel oil, and 1,106 bbls. of red and pale oil.

British India took 65,995 bbls. of fuel oil, 36,046 bbls. of red and pale lubricating oil, 3,911 bbls. of black oil, 4,197 bbls. of cylinder oil, and 1,732 bbls. of insulating oil.

China received 49,539 bbls. of gasoline in bulk and 381 bbls. in containers, 242,672 bbls. of kerosene, about 10,000 bbls. of fuel oil, 13,511 bbls. of red and pale oil, 34 bbls. of black oil, 1,255 bbls. of cylinder oil, 11,000 bbls. of mineral spirits.

Japan received 150,525 bbls. of crude oil, 94,224 bbls. of gasoline, 91,009 bbls. of kerosene, over 252,000 bbls. of fuel oil, 7,326 bbls. of red and pale oil, 495 bbls. of black oil, 737 bbls. of cylinder oil, 2,650 bbls. of mineral spirits, and 1,327 bbls. of insulating oil.

Philippine Islands

The Philippine Islands took 45,820 bbls. of gasoline in bulk and 6,405 bbls. in containers, 52,381 bbls. of kerosene in bulk and 2,850 bbls. in containers, about 22,000 bbls. of fuel oil, 2,161 bbls. of red and pale oil, 2,000 bbls. of mineral spirits, and 1,203 bbls. of insulating oil.

Australia took 144,816 bbls. of gasoline in bulk and 2,297 bbls. in containers; 50,382 bbls. of kerosene in bulk and 417 bbls. in containers; 12,013 bbls. of red and pale oil; 1,031 bbls. of black oil; 3,262 bbls. of cylinder oil and 7,730 bbls. of mineral spirits.

New Zealand was a heavy taker of gasoline, receiving 85,779 bbls. in bulk and 1,097 bbls. in containers; also 8,106 bbls. of kerosene, over 125,000 bbls. of fuel oil and 34,860 bbls. of mineral spirits.

Belgian East Africa took 10,795 bbls. of gasoline in containers, and 9,978 bbls. of kerosene in containers.

The Gold Coast received 4,053 bbls. of gasoline and 3,621 bbls. of kerosene.

Nigeria received 3,323 bbls. of gasoline and 2,810 bbls. of kerosene.

Mosambique took 4,869 bbls. of gasoline and 2,767 bbls of kerosene.

Countries of origin of imports into the United States during August follow: Rumania, 49,421 bbls. of gasoline; Canada, 20,287 bbls. of fuel oil, 1,109 bbls. of gasoline; Mexico, 114,374 bbls. of fuel oil, 131,838 bbls. of crude oil; Trinidad and Tobago, 60,336 bbls. of gasoline; Netherland West Indies, 1,316,028 bbls. of fuel oil; Colombia, 315,000 bbls. of crude oil; Ecuador, 75,331 bbls. of crude oil; Venezuela, 1,340,267 bbls. of crude oil; and Netherland East Indies, 1,814,472 pounds of paraffin and paraffin wax.

Manufacture and Uses for Asphalt and Cut-Backs

(Continued from Page 13)

conditions of years ago. The extra subgrade for this purpose may be built up on the new shoulders by carefully working stone and gravel into them for several months before the resurfacing is done. The importance of properly preparing these edges cannot be overestimated if failure of the surface between the old and the new foundations is to be avoided.

After thoroughly cleaning the old surface, preferably with a revolving brush, the holes are patched as in maintenance work with small aggregate and cut-back well tamped in. The stone which may vary from 1 to 2½ inches in size is then spread upon the road and leveled off to a thickness of 2 to 4 inches, after which cut-back is applied in three or more applications. A certain amount of harrowing may be resorted to in mixing the first bitumen, but the surface is rolled after each application. A cover coat of finer stone is brushed on just before the final application of cut-back, and the road is then dragged to work it into the voids. Rolling for several days while the asphalt is hardening completes the job except for the customary seal coat later in the season. Where retread is laid on top of old gravel or sand surfaces, a prime coat of light road oil or slow curing cut-back should be applied to give proper bonding between the subgrade and the cover coat. Costs will vary with the availability of the raw materials but will usually range from $2,000 to $3,000 per mile. Kentucky, West Virginia, and several other eastern states have hundreds of miles of retread surface in their highway systems which have given general satisfaction.

Mixed in Place

Probably the most difficult construction detail of the bituminous macadam type of pavement is the coating of the stones thoroughly with asphalt binder. Gravity flow aided by the pressure from the distributor must be depended upon to carry the asphalt to all parts of the mix and gravity does not always do a thorough job. Where paving asphalt is used as the binder, little can be done to obtain distribution other than extensive rolling because the asphalt sets up almost immediately. With the introduction of cut-backs, however, there was evolved the idea of harrowing and blading the stone to distribute the oil over its surface. This method of operation soon became known as "mixed in place" and now enjoys wide-spread popularity. Medium volatility cut-backs are used in order to prevent "setting" of the asphalt before mixing has been completed. Both macadam aggregate and graded aggregate are handled by this method which is now used in nearly every state in the Union. For macadam aggregate, the construction is identical with that described for bituminous macadam with the exception that the stone is harrowed and bladed after application of the asphalt and before rolling.

Surface Treatment

The Bureau of Public Roads and the South Carolina State Highway Department co-operated in experiments on top soil roads. It was found that, after thorough sweeping, a double treatment consisting of a prime coat followed by a high asphalt content, slow curing cut-back binder with a mineral covering of one-half inch stone gave a successful and economical treatment. The finished surface may be rolled or traffic compacted, but it is necessary that it be well bonded and laid on a well supported base with efficient drainage. Soils suitable for this treatment must have a minimum tendency toward capillarity because the thinness of the mat will not permit even a slightly water softened base. Asphalt of 100 to 300 penetration applied at about 300° F. is a satisfactory substitute for the cut-back.

This treatment is now popular all over the southeastern states where the soil is mostly a sand-clay mixture of low capillarity. It may also be applied to well-compacted gravel roads and to old macadam which may be in need of a surface dressing. When properly maintained, it makes a satisfactory surface at a very low cost.

Sheet Asphalt

In this brief discussion, the mention of sheet asphalt and bituminous concrete pavements, sometimes known as hot mix types, has been omitted. Large quantities of paving asphalt are used in their construction but very few cross-country highways in this vicinity have been built by these methods. In as much as the construction details are well standardized, no attempt will be made here to describe them. However, it will suffice to mention that some of our northern states are experimenting with sheet asphalt over concrete or bituminous concrete bases on their lighter traffic highways. It is too early, as yet, to draw conclusions, but the so-called city asphalt pavement may move out into the rural sections before many

California Crude Oil Prices

STANDARD OIL CO. OF CALIFORNIA
(Effective June 26, 1932)

For current purchases of crude oil at the well (unless otherwise specified.) (All gravities above those quoted take highest price offered in that field.)

Gravity—	Signal Hill (Long Beach)	Seal Beach, Alamitos Heights, Huntington Beach	Inglewood	Playa Del Rey	Olinda-Brea Canyon	Torrance	Richfield	Coyote Hills	Santa Fe Springs	Midway-Sunset, Elk Hills, Buena Vista Hills	Lost Hills	Athens, Rosecrans, Dominguez	Montebello	Wheeler Ridge	Coalinga	Whittier-LaHabra
14-14.9	$.65	$.65	$.65	$.65	$.65	$.65	$.65	$.65	....	$.55	$.55	....	$.65	$.55	$.55	$.65
15-15.9	.65	.65	.65	.65	.65	.65	.65	.65	....	.55	.55	....	.65	.55	.55	.65
16-16.9	.65	.65	.65	.65	.65	.65	.65	.65	....	.55	.55	....	.65	.55	.55	.65
17-17.9	.65	.65	.65	.65	.65	.65	.65	.65	....	.55	.55	....	.65	.55	.55	.65
18-18.9	.65	.65	.65	.65	.65	.65	.65	.65	....	.55	.55	....	.65	.55	.55	.65
19-19.9	.65	.65	.65	.65	.65	.65	.65	.65	....	.55	.55	....	.65	.55	.55	.65
20-20.9	.69	.69	.71	.69	.69	.69	.69	.65	....	.59	.59	....	.65	.57	.59	.68
21-21.9	.74	.74	.77	.74	.74	.74	.74	.66	....	.63	.63	....	.67	.60	.62	.72
22-22.9	.79	.79	.82	.78	.79	.79	.79	.70	....	.69	.69	....	.70	.63	.65	.77
23-23.9	.84	.84	.88	.82	.84	.84	.84	.76	....	.75	.75	....	.73	.66	.68	.83
24-24.9	.89	.89	.92	.86	.89	.89	.89	.81	$.73	.81	.81	$.89	.76	.69	.72	.89
25-25.9	.93	.93	....	.91	.93	.93	.93	.86	.79	.87	.87	.93	.80	.72	.75	....
26-26.9	.97	.97	....	.96	.97	....	....	.90	.84	.92	.91	.97	....	....	....	....
27-27.9	1.00	....	....	....	1.00	....	....	.94	.89	.97	.94	1.00	....	....	....	....
28-28.9	1.03	....	....	....	1.03	....	....	.98	.94	1.02	.99	1.03	....	....	....	....
29-29.9	1.06	....	....	....	....	....	....	1.02	.98	1.07	1.02	1.06	....	....	....	....
30-30.9	1.09	....	....	....	....	....	....	1.06	1.02	1.12	1.06	1.09	....	....	....	....
31-31.9	....	....	....	....	....	....	....	....	1.06	....	....	1.12	....	....	....	....
32-32.9	....	....	....	....	....	....	....	....	1.10	....	....	1.15	....	....	....	....
33-33.9	....	....	....	....	....	....	....	....	1.14	....	....	....	....	....	....	....
34-34.9	....	....	....	....	....	....	....	....	1.18	....	....	....	....	....	....	....
35-35.9	....	....	....	....	....	....	....	....	1.22	....	....	....	....	....	....	....
36-36.9	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....

The Texas Company, effective June 26, posted same prices as the Standard Oil Co. in Signal Hill, Alamitos Heights, Huntington Beach, Torrance, Richfield, Montebello, North Whittier and Santa Fe Springs.

The Union Oil Co., effective June 26, posted the same price as the Standard Oil Co. in the Signal Hill, Alamitos Heights, Seal Beach, Huntington Beach, Athens, Rosecrans, Dominguez, Torrance, Santa Fe Springs, Playa Del Rey, Coyote, Olinda, Brea Canyon, Richfield and Montebello. In Coalinga, Lost Hills, Kern River, McKittrick, Midway-Sunset, Elk Hills and Buena Vista Hills the Union Oil Co. met the Standard Oil Co.'s prices from 14 gravity upward, but posted a price of 50 cents for oil 11 to 13.9 degrees in gravity.

General Petroleum adopted Standard Oil Co.'s prices, effective June 26, in Rosecrans, Signal Hill, Alamitos Heights, Santa Fe Springs, Inglewood, Torrance, Brea Canyon and Olinda, up to 25.9 degrees; Richfield, Midway-Sunet, Kern River, Mount Poso, Round Mountain, and Coalinga and posted in Rincon as follows: 22-22.9 degrees, 68 cents; 23-23.9 degrees, 73 cents; 24-24.9 degrees, 78 cents; 25-25.9 degrees, 82 cents; 26-26.9 degrees, 86 cents; 27-27.9 degrees, 89 cents; 28-28.9 degrees, 92 cents; 29-29.9 degrees, 95 cents; 30 degrees and over, 98 cents. In Rosecrans, General Petroleum Co. pays 65 cents for 14 to 19.9 gravity oil; 20-20.9 degrees, 69 cents; 21-21.9 degrees, 74 cents; 22-22.9 degrees, 79 cents; 23-23.9 degrees, 85 cents, and Standard's prices for oil of higher gravity.

Associated Oil Co., effective June 26, met Standard Oil Co.'s prices in Signal Hill, Huntington Beach, Seal Beach, Alamitos Heights, Richfield, Torrance, Inglewood, Athens, Rosecrans, Dominguez, Santa Fe Springs, McKittrick, Kern River, Midway-Sunset, Elk Hills, Buena Vista Hills, Lost Hills, Belridge and Coalinga.

Kettleman Hills—The Union Oil Co., effective June 26, posted 33-33.9 gravity oil at 91 cents; 34-34.9 degrees, 93 cents; 35-35.9 degrees, 95 cents; 36-36.9 degrees, 97 cents; 37-37.9 degrees, 99 cents; 38-38.9 degrees, $1.01; 39 degrees and over, $1.03. Standard Oil Co., Associated Oil Co. and General Petroleum Co. adopted same price schedule on same day.

Santa Paula—The Union Oil Co. and The Texas Company, effective June 26, posted as follows: 14 degrees to 19-19.9 degrees, 66 cents; 20-20.9 degrees, 69 cents; 21-21.9 degrees, 72 cents; 22-22.9 degrees, 75 cents; 23-23.9 degrees, 78 cents; 24-24.9 degrees, 81 cents; 25-25.9 degrees, 84 cents; 26-26.9 degrees, 87 cents; 27-27.9 degrees, 90 cents; 28-28.9 degrees, 93 cents; 29 degrees and above, 99 cents.

Shields Canyon and South Mountain—The Texas Company, effective June 26, posted same prices as in Santa Paula.

Orcutt—The Union Oil Co., effective June 26, posted prices as follows: 16 degrees to 19.9 degrees, 55 cents; 20-20.9 degrees, 59 cents; 21-21.9 degrees, 63 cents; 22-22.9 degrees, 69 cents; 23-23.9 degrees, 75 cents; 24-24.9 degrees, 81 cents; 25-25.9 degrees, 87 cents; 26 degrees and above, 92 cents.

Playa Del Rey—Subject to a field gathering charge of 5 cents per barrel.

Newhall, McKittrick and Kern River—Standard Oil Co., effective June 23, 1931, posted 55 cents for oil of all grades.

Elwood Terrace—Standard Oil Co., effective June 26, 1932, posts 33-33.9 degrees, $1.04; 34-34.9 degrees, $1.10; 35-35.9 degrees, $1.16; 36-36.9 degrees, $1.22; 37-37.9 degrees, $1.28. All prices f.o.b. ships.

Ventura Avenue—General Petroleum Co. and Associated Oil Co. effective June 26 posted as follows: 22-22.9 degrees, 72 cents; 23-23.9 degrees, 77 cents; 24-24.9 degrees, 82 cents; 25-25.9 degrees, 86 cents; 26-26.9 degrees, 90 cents; 27-27.9 degrees, 93 cents; 28-28.9 degrees 96 cents; 29-29.9 degrees, 99 cents; 30 degrees and over, $1.02.

Potrero—Associated Oil Co., effective June 26, posted same prices as are paid by all companies in Athens, Rosecrans and Dominguez

more years have passed, for its cost is considerably less than concrete in localities where suitable aggregate is available.

General Maintenance

Asphaltic material has no superior as a means of repair and maintenance on all high types of road surfaces. The quick-setting properties of cut-back, coupled with its fluidity at ordinary temperatures, make it the logical form to use in small patching and repair jobs where an aggregate filler is employed although hot asphalt is also widely used. The holes are merely cleaned, primed with a layer of cut-back, and then filled with the mixed aggregate and oil while a thorough tamping completes the job. The surface treatment as described above is often applied as a maintenance measure to generally roughened macadam or gravel surfaces for truing and leveling the riding surface. Used in this manner it closely resembles a seal coat and may be so designated.

For crack and brick filling, special straight asphalts are available, which, after pouring, need only a covering of sand or gravel to prevent pulling of the surface by traffic.

Priming Coats

Cut-backs are exceedingly useful in combating the effects of a moist climate or wet subgrade. Light oils have a tendency to bleed from the surface under the influence of moisture in the subgrade and under these conditions they present the appearance of too fat a mix. The failure of the road takes place rapidly because the moisture replaces the oil which is fluid enough to move bodily out on the road surface. Prime coats of a low viscosity, medium volatility cut-back have been used effectively to seal off water movement under such conditions because the cured asphalt is hard and nonflowing.

Cut-back primers have been giving satisfaction even in semimoist climates because better penetration results from their low viscosity. At the same time their asphalt content is much higher than the usual low viscosity asphaltic oil used for penetrating so that a denser seal, as well as deeper penetration, is the result.

Use at Airports

Asphaltic surfaces have become the favorite paving for airports where the traffic necessitates something more than natural earth or turf. Busy unpaved airports tend to become dusty in dry weather and so muddy on wet days that landing or taking off is a dangerous experiment at best. For these reasons the more important airports have installed all-weather runways but there are about as many different pavements used as there are airports. Local earth, gravel, or stone aggregates, because of their low price, are most generally favored with some form of slow curing cut-back asphalt or soft paving asphalt as a binder. The size of the aggregate used will largely determine the hardness of the surface which should have a certain resiliency for landing strips to save wear on the airplane tires. The mixture is usually rolled lightly and finished off with a cut-back seal coat and stone chips. Because the service required of such a pavement is not so severe as on a highway, the subgrade does not have to be so compact nor as thick, but good drainage is just as essential.

In conclusion, I wish to emphasize the fact that these asphalt surfaces which I have discussed are not beyond the reach of the users of secondary roads. I hope I have dispelled the prevalent impression that the so-called hard asphalt roads are expensive to construct — much more so than sand, gravel, or road oil types. As a matter of fact, in the light of our present rapidly developing knowledge of the roadbuilding art, we may safely claim that many hard surfaces are cheaper in the long run than even properly maintained dirt roads. The records are full of cases where maintenance on hard asphalt under heavy traffic over a long period of years has averaged between 1 and 2 cents per square yard. Translate this into cost per mile and you have one of the most convincing reasons why more high-type asphalt pavements should be built.

Wild Gulf Coast Well Brought Under Control by Use of Arkansas Product

By L. G. E. BIGNELL
Petroleum Engineering Editor

Early in September the United North & South Development Co.'s No. 1 Stoddard, a deep test drilled in Buckeye townsite in west central Matagorda County, Texas, blew in out of control and ran wild for several days in spite of efforts made to kill it by the use of untreated rotary mud. This well was drilled by Edgar B. Davis of Brockton, Mass., and Luling, Tex., and probably opens a new field of major importance on the Gulf Coast.

The well was drilling at a total depth of 7,926 feet and 120 feet 4 inches of screen was set at a depth of 7,808-7,924 feet and as the drill stem was being withdrawn from the hole it began to spray oil and gas and got out of control. The production of the well was estimated as 1,850 bbls. daily flowing through a one-half-inch choke after it was killed and fitted with new connections and produced under control. The gas flow was estimated at the time it was running wild at from 20,000,000 to 30,000,000 feet.

The oil escaped around the drill stem while the well was out of control through a leak in the christmas tree and quickly cut out the blowout preventer and top connections. The pressure at the well head was estimated as about 1,500 pounds and it presented a difficult repair job.

The first effort made to bring the well under control was to pump rotary mud into it through the drill stem but because of the high pressure encountered this light mud did not have the desired effect.

On September 8 a second attempt was made to kill the well and 25,000 pounds of Opalite mixture was pumped into the well and it was brought under control. The 4-inch drill stem was then withdrawn and a new liner set, with new christmas tree connections, and the well brought onto production first through a one-half and later a one-quarter-inch choke.

The Opalite used in killing this wild well is mined and processed at Rogers, Ark., and has been used as a rotary mud mixture in many sections of the country and particularly on the Gulf Coast where it has been successful in many rotary wells to keep high pressure gas under control during drilling. This product was described in an article in The Oil and Gas Journal of March 13, 1930, but it is believed of enough interest to bear repeating part of it at this time.

Opalite is the trade name for a product made from decomposed chert found in thick seams at varying depths beneath the surface. Its principal constituent is silica and by analysis it has been found to be made up of 99.50 per cent of that element with the remaining .5 per cent composed of iron oxide, aluminum, calcium oxide and magnesium oxide.

This amorphous silica is of very fine texture and in the mill at Rogers, Ark., it is ground to pass 300-mesh which makes it a very satisfactory material for rotary mixture. It is also used for a paint pigment and the base for a polishing compound as well as having other commercial uses.

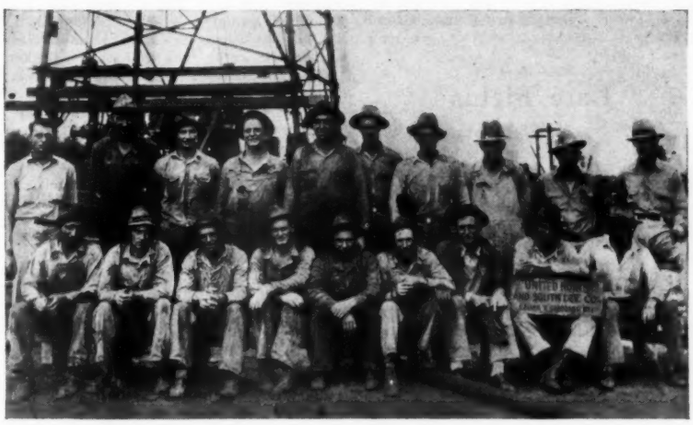
The history of these deposits of decomposed chert is very interesting and we are told by geologists that old deposits of flint were formed by various types of sea life which removed the silica that was dissolved in the sea water and redeposited it in the form of skeletons upon their death. Chert is an impure flint and usually of lighter color than flint.

After the chert had been deposited it was decomposed by the action of ground waters and the remains of these reworked deposits are now being mined by Corona Silica, Inc., Rogers, Ark., from a huge deposit located a few miles from town.

In a specially designed mill the blocks of decomposed chert are ground to pass 300-mesh screens and then dried and sacked. When this powder is mixed with water in the proportion of 4 quarts of dry powder to 1 quart of water a mud is formed that is very viscous and has a weight of about 16 pounds to the gallon.

This mud when collected on a spatula and held at a height of about 30 inches above the mixing vessel forms long strings that have about the same appearance as a good grade of lubricating oil. It will hold together in this long string for a considerable interval and in direct sunlight is quite transparent.

Opalite has been used in the Oklahoma City Field and several shipments have been made to the Turner Valley Field in Alberta, Canada, where very high pressures were encountered and much trouble was encountered in finding a mixture that would permit the wells to be brought in under control. Its properties of making a heavy mud that is viscous and colloidal and will remain in suspense for a long period is gaining favor with drilling contractors in many fields and it has been used in considerable quantities in many of the Gulf Coast fields before it was used in killing this wild well in the newly discovered Buckeye Field.



Drilling crew who drilled and completed United North & South Development Co.'s No. 1 Stoddard at Buckeye, Matagorda County, Texas. Top row, left to right—R. A. Edmonson, O. R. Hanson, R. Chitwood, A. Nugent, W. A. Dickerson, John Reed, C. McCarley, R. H. Fatheree, C. O. West and H. P. McGuirt. Bottom row—R. Inscore, H. S. Wiggins, S. McCarley, A. G. Thompson, Charles Hall, Earl Gray, C. Graham, F. A. Leisner, E. G. Bixler.

Proposed Tanker Pool to Help Stabilize Market

(Continued from Page 21)

narily available for the movement of petroleum, being used for the shipping of linseed oil, molasses, alcohol, etc.

While detailed data are not available, it is estimated that fully half of the tankers under American registry are now laid up out of service, with but skeleton crews on board.

The ordinary method of operation of the tanker fleets of the large American oil companies is to utilize their own vessels on regular runs, and to charter any tankers not needed for company business in the open market, such vessels competing with other tankers in the matter of rates. Under current conditions in the industry, however, with oil movement greatly retarded, there is a large surplus of available tonnage. Many owners, rather than lay up their vessels with the attendant expense and inconvenience, have been taking cargoes at any price available in an effort to keep their boats in service. This has driven freight rates not only below profitable levels, but to the point where many tankers are being operated at a loss.

The oil companies, apparently, have come to a belated recognition of the fact that their tanker fleets occupy a unique position in the shipping field. Not only do the companies own the boats, but they are also the principal users of them and the principal charterers. Up to now, the potentialities of this situation have apparently been overlooked, and the large measure of control of rates, tonnage, etc., held by the oil companies has not been exercised.

With a tanker pool, such as is now under contemplation, this situation would be radically changed. Organization of available tankers into a tanker conference would give the operators the right of establishing a minimum rate on both coastal and intercoastal shipments, with operation of the pool to be under rules and regulations devised by the conference, with the approval of the U. S. Shipping Board. Such a method of operation would permit the oil companies to organize their tanker operations on at least a cost basis, without such combining of tonnage coming into conflict with the anti-trust laws, as similar combines or conferences are in operation in the remainder of the marine industry.

The plan of operation of the conference pool would involve the laying up of whatever surplus tonnage might exist in the coastal and intercoastal trades, with the owners of such vessels to be compensated by the pool from revenues derived from the operation of active vessels participating in the conference. Thus, only enough tonnage would be kept in commission to take care of the actual requirements of shippers, with sufficient reserve tonnage available at all times to fill any sudden increase in demand for tankers.

The pool method of operation would not only assure the distribution of available business, on an equitable basis, but would protect the tanker owners from the consequences of reckless competition for business, and of still greater importance to the oil industry would impose definite limitation upon the movement of distressed gasoline and other refined products, and would protect markets against the dumping of distressed and underpriced refined products made possible by record low tanker charter rates.

Contrary to earlier reports, it is now indicated that the proposed conference will, at the outset at least, involve only the coastal and intercoastal trades, although it is considered likely that the plan, if successful in these fields, will be extended to other runs.

The conference plan, to be fully effective, requires virtually 100 per cent co-operation, and nothing official in regard to the pooling plan is expected to be forthcoming until the sponsors of the movement have made the necessary progress in lining up the co-operation of independent tanker operators.

Frank O'Day Dies in Oil City Pa., After Illness of Six Weeks

Frank O'Day, one of a family illustrious in the history of the oil industry, died in Oil City, Pa., on Tuesday, October 11, after an illness of six weeks. He was nearing 51 years of age.

Mr. O'Day was president of the Oil City Boiler Works and of the Venango Oil & Land Co. and head of the O'Day Oil Co., which company had extensive oil holdings in Pennsylvania, Ohio and

FRANK O'DAY

West Virginia, and was a director in the Oil City Trust Co.

Deceased was the second son of the late Daniel O'Day, a great figure in oil transportation in the early days of the industry. The father was a vice president of the old Standard Oil Co., and vice president and general manager of the National Transit Co.

In 1878 Daniel O'Day, Michael Geary and B. W. Vandergrift established the tank and boiler shop in Oil City which grew into the Oil City Boiler Works, of which Frank O'Day was at the head at the time of his death. The son followed his father into the oil and manufacturing business and proved that he possessed all the business sagacity of the older O'Day.

In 1904 Frank O'Day was married to Miss Judith Dwyer of Oil City, who survives together with three sons, Daniel, Frank, Jr., and William H. O'Day, all of Oil City. One brother, John, who resides in London, and six sisters are also among the survivors.

Frank O'Day took an active part in the civic, social and religious affairs of his home city and was a member of the Calumet and Lambs clubs in New York.

Fair Price for Crude Oil Discussed by W. S. Farish

DALLAS, Tex., Oct. 15.—W. S. Farish of Houston, president of the Humble Oil & Refining Co., outlined a three-point platform which he said the public, the oil industry and lawmakers should be able to agree upon, at a joint meeting in Dallas of Progressive Texans, Inc., the Texas State Manufacturers Association and the Texas Club.

"A fair price for crude oil," he said, "means prosperity for Texas' greatest industry; inadequate prices mean impoverishment of this same industry and less income to the State from its gross production tax on crude oil."

He submitted three conclusions which he said, "I believe we can all accept and support:

"First, that the interest of owners of oil and gas lands, the stability of the petroleum industry and the general public welfare all require that physical waste of oil and gas be prevented. These resources are limited in supply, irreplaceable and essential to public convenience, industrial progress and national defense. Their waste and destruction without beneficial use is nothing less than a social crime.

"Second, that equity and social justice require the preservation of the correlative effects of all owners having an interest in an oil and gas pool by insuring to each the opportunity to recover his ratable share of the oil and gas therein and the opportunity to make effective use of the reservoir energy of the common pool for the purpose of recovering his oil in maximum volume and at minimum lifting costs.

"Third, that the production of oil and gas should be subjected to such control at all times as to permit the industry to obtain a reasonable rate of return upon capital wisely and legitimately invested; maintain regular and continuous employment for both the labor and capital engaged in the industry, and insure the public a constant supply of oil over a long period, not only at fair prices, but at a lower average price than would prevail if a reckless, wasteful program were adopted."

Late Fields

KANSAS

A new producing horizon was discovered in the Hollow Pool, in Harvey County, when Frost and others' No. 1 Martens, NE cor. SE SE, Section 19-22-3w, was estimated to be making 5,000 bbls. a day from the chat at 3,195-3,308 feet. Other wells in this area are producing from the Hunton lime, which is found at approximately 3,490 feet. It is the first well in the area to find production in the chat and it extends production one location southwest.

Vernon Oil & Gas Co.'s No. 1 Just, NE cor. SW, Section 26-19-2w, on the west side of the Ritz-Canton Pool, McPherson County, found oil in the Viola lime at 3,362-72 feet. The oil rose 1,000 feet in the hole. It extends the Viola lime production one location to the west.

Lario Oil & Gas Co.'s No. 1 Hill, SE cor., Section 23-19-2w, McPherson County, made 555 bbls. of oil from the chat at 2,910-57 feet. The east offset, completed by R. E. Youker and others, No. 3 Gratton, SW cor., Section 24-19-2w, made 100 bbls. of oil from the chat at 2,925-81 feet.

Skelly Oil Co.'s No. 2 Leisman, SW cor., Section 20-27-10w, Kingman County, has landed casing at 3,378 feet on top of the Kansas City-Lansing lime and was rigging up standard tools before drilling the cement plug.

Olson Drilling Co. and others' No. 2 Rudicel, C NW SW, Section 24-23-4w, Reno County, was nearing the pay horizon and was drilling at 3,310 feet.

Sinclair Prairie Oil Co.'s No. 1 in the NW cor. NE, Section 3-16-12w, Barton County, is a new location and a slush pond was being dug.

Mathews and Rex' No. 3 Reeser, CNL NE NE, Section 7-24-12, Greenwood County, is swabbing 125 bbls. of oil a day from the pay at 1,725-39 feet.

OKLAHOMA

L. H. Wentz and others' No. 1 Wolff, C SE NW, Section 17-20-2w, Noble County, drilled on a 2,160-acre communitized block, which found oil in the Wilcox sand at 5,195-97 feet where it flowed 1,817 bbls. the first 24 hours. It is now being drilled deeper and on the last reports it was drilling at 5,209 feet. The gauge of October 18 was 998 bbls. When drilling was resumed at 5,197 feet the bit was drilling in dolomite and at 5,206-09 feet sand was found, with no increase in the production. As the result of this well two new locations were made on which work is progressing. Rollin and others' No. 1 in SE cor. SW, Section 6-20-2w, and Stanolind Oil & Gas Co. and others' No. 1 in C NE NW, Section 33-20-2w.

The Carter Oil Co. and others' No. 1 Community Shawbell, C SW NE, Section 1-12-4w, Oklahoma County, was drilling at 2,100 feet. It is located on the northwest edge of Oklahoma City on a block of 953 acres.

Trowbridge and others' No. 1 Price, SW cor. NE NE, Section 30-2-9w, a wildcat test in Comanche County, continues to flow by heads at the rate of 20 bbls. an hour from sand at 2,050-90 feet, with the total depth of 2,110 feet. Additional tankage was being erected and the well will be given a production test.

Phillips Petroleum Co.'s No. 1 Drew, SE cor. NW SE, Section 22-11-3w, in the Oklahoma City Field, flowed 593 bbls. of oil the first hour. The gas is estimated at 15,000,000 feet a day from a total depth of 6,545 feet. Same company's No. 1 Owenby, NW cor. SE, Section 22-11-3w, flowed 1,596 bbls. of oil in 3 hours and 12 minutes, through a 4-inch choke. The gas was estimated at 18,000,000 feet a day. The 7-inch casing was landed at 6,472 feet and the total depth is 6,565 feet.

GULF COAST

HOUSTON, Tex., Oct. 18.—Dick Schwabb's No. 1 Carlton & Davis, A. Viesca Survey, Sunshine district of southern Polk County, blew in late Monday estimated good for 20,000,000 to 50,000,000 feet of gas daily. It showed no oil or salt water. The well is in a broken sand and sandy shale at 4,239-4,311 feet, where 105 feet 8 inches of 5⅞-inch screen with 92 feet of blank was set with tubing on top. The well is blowing through open connections and will be killed to install Christmas tree.

SUPPLY STORES NEAREST PERRY

In the "Service on New Fields" for the Perry area in southern Noble County, Oklahoma, it was stated that the nearest supply houses were located in Blackwell and Tonkawa, Okla. It should have read that the nearest supply houses are located in Covington, Garber and Blackwell, all in Oklahoma. Covington is located on U. S. Route 64 and on the Frisco Railroad. It is west of Perry. Garber is on State Highway No. 15, 2 miles north of U. S. Highway 64, and on the Rock Island Railroad. Blackwell is on U. S. Route 77 and on the Santa Fe Railroad.

Argentina Plants Increase Output of Lubricating Oil

NEW YORK, Oct. 17.—Increasing production of lubricating oil in Argentina is responsible for the sharp drop in that country's imports during 1931, which totaled but 28,172 tons, against 50,348 tons in the previous year, according to "Boletin de Informaciones Petroliferas."

Yacimientos Petroliferos Fiscales, the government oil agency, is now refining lub oil at its Comodoro Rivadavia refinery and will soon place in operation a large new lub oil refinery at La Plata.

Compania Nacional de Petroleo (S.O. N.J.) produces lub oil at its Campana refinery, while Compania "El Condor" and Compania Rio Atuel Itda. S.A. Minera e Industrial is also manufacturing lubricating oil.

TANK WAGON CHANGES

(Continued from Page 26)

Ala., 2 cents to 10 cents. October 12 it advanced the price of kerosene in Tampa, Fla., 1 cent to 13 cents. On the same date it reduced the price of kerosene in Macon, Ga., 1 cent to 12 cents. On October 13 it reduced the price of kerosene one-half cent to 11.5 cents in Pensacola, Fla. On October 14 it reduced the tank wagon and station price of gasoline in Louisville, Ky., 1 cent to 16 cents.

Standard Oil Co. of Louisiana October 4 reduced the tank wagon and station price of gasoline one-half cent in Lafayette, La., to 17 cents. October 5 it reduced the tank wagon and station prices in Chattanooga, Tenn., 1 cent to 19.5 cents. October 6 it reduced the tank wagon and station price in Alexandria, La., to 16.5 cents.

Continental Oil Co. October 11 reduced the price 2 cents in Cheyenne, Wyo., making the tank wagon 16 cents and station 19 cents. October 5 it reduced the tank wagon price of kerosene in Albuquerque, N. Mex., 4 cents to 10 cents.

W. R. Boyd Defends Code of Ethics in Ouster Case Hearing

AUSTIN, Tex., Oct. 17.—W. R. Boyd, Jr., executive vice president of the American Petroleum Institute, was the principal witness at the hearings before Commissioner George E. Shelley in Attorney General Allred's suit against the institute and some 15 oil companies arising out of the code of ethics.

Mr. Allred claimed the institute was the medium through which the alleged agreement on the part of oil companies to monopolize market outlets for gasoline and refined petroleum products was effected.

Mr. Boyd testified he received $45,000 per year as executive vice president, and gave figures showing the receipts of the institute since 1928. Objection was made to the questions concerning the institute's finances by attorneys for all defendants on the ground they were immaterial and irrelevant.

All defendants also made objection to taking any testimony on the ground the statute under which Mr. Boyd, Paul E. Hadlick, of the institute, and the records of the organization were brought into court was unconstitutional. The defendants said the statute gave the State an unfair advantage in that it opened the records of all companies to the State and provided no method by which the defendants could obtain the information.

Mr. Boyd explained that money for operation of the institute was received from membership fees and by contributions to maintenance fund. Contributions for the years from 1927 to the present time, exclusive of membership fees were: $384,057 in 1928; $436,515 in 1929; $409,172 in 1930; $291,089 in 1931 and $234,000 to date in 1932.

In answer to questioning of Mr. Allred, Mr. Boyd testified that advisability of a code had been discussed at various meetings of small marketers before it was broached to the American Petroleum Institute. He stated it was suggested at these meetings that the institute take the lead in formulating trade practices for the oil industry.

Mr. Boyd denied that any official of The Texas Company or the Standard Oil Co. of New Jersey, named among the defendants, had discussed the code with him prior to 1928, when the subject was considered at the annual meeting of the American Petroleum Institute. Prior to that time P. M. Miskell of the Empire Refining Co. of Tulsa and H. P. Erhardt of the White Star Refining Co. of Detroit had discussed it with him, he said.

Mr. Allred produced the record of a hearing before the Federal Trade Commission in 1929 in which he quoted Mr. Boyd as having testified that "pressure" was brought to bear on the institute to formulate a code and asked Mr. Boyd to name specifically the persons who brought the pressure. Mr. Boyd and Mr. Allred engaged in an argument over the meaning of the term pressure and Mr. Boyd finally stated that pressure in this instance was more or less sentiment against unfair trade practices.

Mr. Boyd testified the movement originated with small marketers and that they complained specifically against the practice of companies giving rebates, selling coupon books at a discount, furnishing equipment and other practices. Mr. Boyd also stated that even the large companies looked upon these practices as "terrible" and that everybody in the oil business admitted they were "terrible." He said he believed the duplication in distribution facilities of oil companies was uneconomic and an undue burden on the industry, and the consuming public.

COLONEL MURRAY RECOVERING

Colonel Cicero I. Murray, director of proration enforcement in the Oklahoma City oil field, has recovered from a heart attack suffered Saturday. For a time, a pulmotor was required to keep Colonel Murray breathing.

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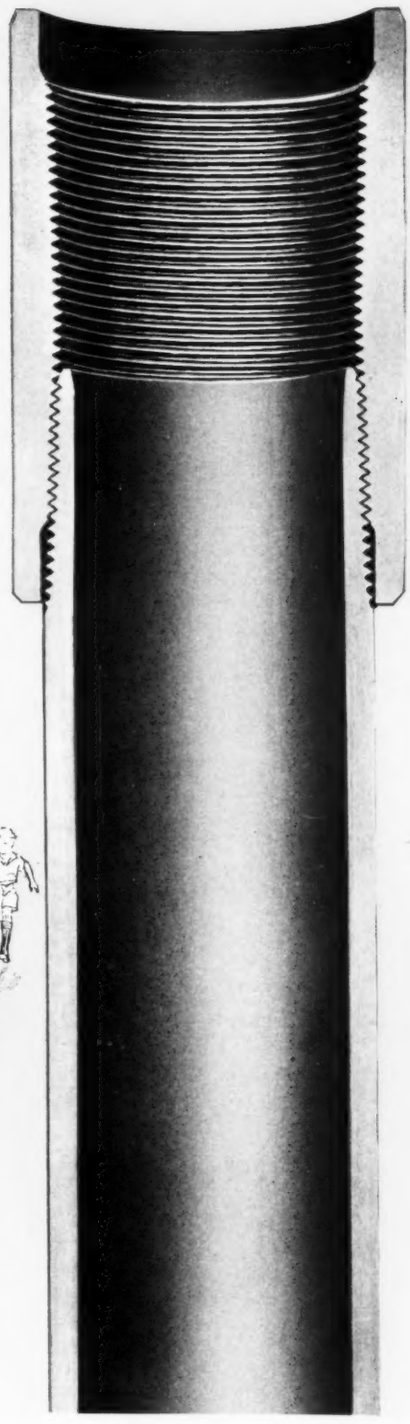

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SERVICE ON NEW FIELDS

Rabbs Ridge, Fort Bend County, Texas Gulf Coast

Compiled by The Oil and Gas Journal, October 17, 1932

LOCATION OF FIELD

Approved name.

Rabbs Ridge designated by Houston Geological Society and Texas Gulf Coast Scouts Association as official name. Field referred to by some companies as Thompson. Sometimes called Clear Lake or Lockwood.

Geographical location.

Eastern Fort Bend County.

Principal towns and cities near field.

Closest town is Thompson, a small country town, 2½ miles distant. Richmond, county seat of Fort Bend County, is 17 miles northwest. Houston is 30 miles northeast.

Cities and towns where supply houses have branches.

Houston.

Railroads serving area.

Town of Thompson is on main line of Purcell (Okla.)-Galveston division of Santa Fe Railroad.

Sites available for supply houses.

Control of field is in hands of major companies who have own warehouses supplied directly out of Houston. No branches of supply houses needed.

Character of roads.

Operators of field have provided good gravel road to and through field from Thompson. Old gravel road from Thompson to Richmond and also new road from Thompson to Sugarland connects with Houston-San Antonio paved highway.

Type of country.

Low and swampy, grown over with heavy underbrush. Field, however, has been cleared out and fairly dry.

Trucking and hauling facilities available.

All hauling is direct out of Houston.

Hotel and housing accommodations.

No hotel accommodations except at Richmond and Houston. Modern camp provided in field for operators and company employes.

General remarks.

Children in field camp provided school facilities at Thompson. Churches of leading denominations at Richmond.
Field readily accessible out of Houston. Operating companies have provided all modern conveniences for employes.

PIPE LINES

Gulf Pipe Line Co. has 6-inch line to connection with Orchard-Pierce Junction line. Humble Pipe Line Co. has 8-inch to Sugarland Field, where it connects with 10-inch line to Pierce Junction.

GEOLOGICAL DATA

Rabbs Ridge is believed to be a deeply seated salt dome of large size. Discovery is credited to geophysics although indications of a possible dome and field were noted before geophysical work was started and a number of tests were drilled. A pronounced ridge, known as Rabbs Ridge, and from which the fields gets its name, extends through the area. Except for several wells completed early in the field's history from shallower Miocene sands, all production has been from a sand section near the top of the Marginulina division of the Oligocene found at 5,2 0-5,400 feet. While this section runs fairly consistently throughout the present known field, the sands within this section are lenticular in nature and vary considerably from well to well. The Marginulina gives evidence of considerable uplift. The two upper divisions of the Oligocene, however, show little movement although the Miocene sands above indicate a second uplift, but of somewhat lesser extent than that which occurred during the Marginulina time. The Oligocene is topped around 4,600 feet. In the Miocene from around 3,000 feet to the top of the Oligocene there are series of sands, all of which, except in the first few wells, have been passed up in the development of the deep Oligocene sands. Production, which was found in the Miocene sands, was not so satisfactory. Those sands so far have shown considerable gas pressure, particularly one around 4,500 feet, in which several wells have been lost by blowouts.

DEVELOPMENT

Discovery of field.

Discovery well was Cullen & West's No. 1-A Lockwood & Sharp, John Rabb Survey, completed May 21, 1931. This well flowed initially at an estimated rate of 3,000 bbls. through a three-quarter inch choke with pressure of 525 pounds on casing and 800 pounds on line. Bottom was at 3,087 feet in the Miocene. This well did not hold up satisfactorily at 3,087 feet in the Miocene. This well did not hold up satisfactorily and later after the discovery of the Oligocene sands was started deeper but blew out at 4,807 feet, cratered and was abandoned. Although drilled by Cullen & West, who since have sold their interests to Humble Oil & Refining Co., the well was owned jointly on a 50-50 basis with Gulf Production Co., those operators previously having pooled their respective individual blocks in the area.

Development subsequent to discovery of field.

Since purchase by the Humble Oil & Refining Co. of Cullen & West's half interest in the field, Humble Oil & Refining Co. and Gulf Production Co. have carried on a systemmatic program of development with a view toward repressuring. Thirty wells have been completed to date on the joint block, proving up more than 2,50) acres so far. These operators have sought to maintain production around 15,000 bbls. daily, although they are attempting to operate the wells at their most efficient gas oil ratio. More recently, The Texas Company extended production a half mile to the north and out of the jointly owned block of the Humble and Gulf by the completion of a 1,500-bbl. well on its 100-acre Wolters tract. One offset to this already has been brought in by Gulf Production Co. on a lease which it owned individually, and in addition The Texas Company's second test on its lease was preparing to test (October 1). No dry holes have been drilled, although several wells have been abandoned due of blowouts.

Number of operations October 1.

Thirteen rigs running exclusive of derricks and locations.

Future activity.

Development on jointly owned block of Humble and Gulf comprising some 6,000 acres will be carried on systemmatically and conservatively with a view toward getting the greatest ultimate recovery with a minimum of drilling. Both Gulf and Humble operate in the field, although everything is handled as a unit. At the present development of the north end of the field is being necessitated because of The Texas Company's extension well not only by Humble and Gulf jointly on their unit block but also by these companies separately as outside the joint block the acreage is divided into smaller tracts owned by a number of companies individually.

DRILLING CONDITIONS

Drilling water.

Good water not only for drilling but for camp use is obtained from shallow wells.

Boiler fuel.

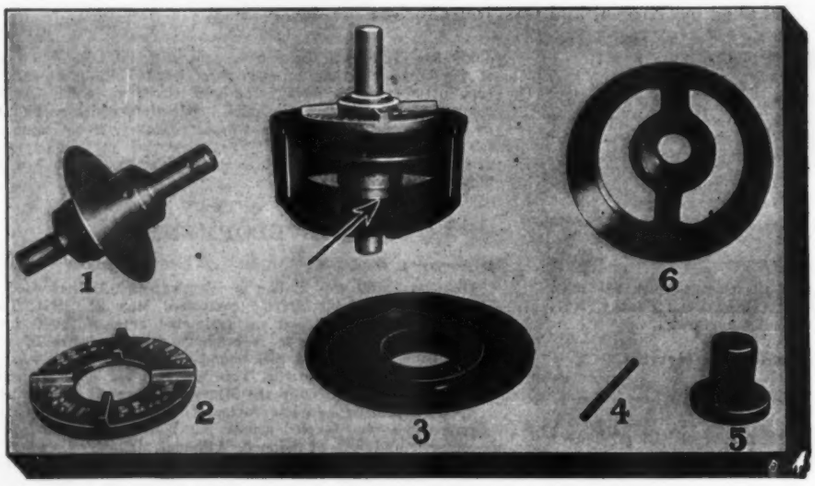
Gas, of which there is an abundant reserve in the field furnishes all fuel requirements. This is obtained from the producing horizon itself although there are numerous other gas sands as yet untouched.

How wells are drilled.

All rigs are owned and run by the operating companies themselves. Both Humble and Gulf have rigs in the field, although crews are interchanged and are furnished homes and board at the jointly owned camp. All costs and expenditures are apportioned equally.

(Continued on Next Page)

MISSION VALVES



MAKE ASTOUNDING RECORD AFTER ASTOUNDING RECORD

. . . . IN SAVING MONEY FOR OIL OPERATORS.

Every oil operator knows that a pump is no better than its valves.

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IT IS NO UNUSUAL FEAT FOR MISSION VALVES TO DRILL 15 WELLS IN EAST TEXAS WITHOUT A REPLACEMENT OF A PART.

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REASON: Sheer superiority proven by breaking record after record.

MAKE MONEY by side-stepping trouble with MISSION VALVES.

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- 9,131 foot well at Refugio, trouble-free under terrific pressure.
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- Any number of equally remarkable records. Write for this list of records . . . proof of all proof of MISSION superiority.

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SERVICE ON NEW FIELDS

Rabbs Ridge, Fort Bend County, Texas Gulf Coast

(Continued from Preceding Page)

Drilling time to complete wells.

From spudding to completion average around 30 days. Easy digging enables operators to make time although high-pressure gas sands necessitate caution.

Type of drilling equipment.

Rotary rigs are used exclusively as in all coastal fields. Standardized equipment facilitates operations. Every well is viewed by operators as an industrial plant and is set up with a view toward permanency. All rigs steam driven and powered by two boilers.

Electric power.

Electric power available but not used for drilling operations because of abundance of gas.

Derricks.

122-foot steel derricks used throughout by The Texas Company.

Type of bits and drill stem.

Fishtail bits used. Rock bits not needed.

Drilling mud.

Natural mud made in drilling but weight admixtures used below 3,000 feet where high-pressure gas sands are encountered.

Casing.

Two strings of casing, surface pipe and the production string, usually are set. Surface pipe, which varies from 10 to 12½-inch, is set and cemented from 950 to 1,300 feet. The production string, usually 7-inch (O.D.), is set and cemented close on top of the sand section. It is customary to drill into the top of the sand section, cement casing, and then after drilling plug, core for the sand to be taken in.

Screen and liner.

The sand section runs from 200 to 400 feet in thickness and it is the practice to set from 100 feet up to as much as 350 to 390 feet of 5-inch screen and liner, of which the screen usually is from two to five joints, depending on the thickness of the sand lens. The liner is sealed off to the casing and then tubing is set.

Drill stem tests.

Drill stem tests not customary. The sand section is fairly consistent and when reached the hole is cored for the sand

Gas hazards and blowout preventers.

Blowout preventers and other blowout precautions required. High pressures are encountered in several sands above 4,600 feet and several wells have been lost despite precautions.

Straight-hole drilling.

Precautions taken to insure straight-hole drilling and all rigs equipped with weight indicators. Straight-hole tests made at intervals.

Rig builders and contractors.

Company crews do all derrick construction and rigging up.

PRODUCTION PRACTICE

Proration restrictions.

Production of wells restricted by order of Railroad Commission, effective September 16, to maximum of 240 bbls. per well. On October 10 Railroad Commission ordered curtailment of production to 3,000 bbls. per day for whole field, effective October 15. No previous restrictions except as applied voluntarily by companies in their efforts to produce all wells at their respective most efficient gas-oil ratios.

Completion of wells.

Wells usually come in after washing, although some are swabbed. Wells completed through chokes, varied according to individual well requirements.

Gas-oil ratios.

Seventy-five per cent of wells in the field have gas-oil ratios of less than 500 feet per barrel. Those having excessively high ratios are shut in.

Character of oil.

Gravity of oil is between 23 and 25 and meets requirements for "Grade A," being very desirable for lubricating stock.

Separators and tankage.

High-pressure and low-pressure separators used. Large storage facilities not needed in field as lines handle most of production to tank farms elsewhere.

Well head pressures.

Pressures vary from 400 to 1,500 pounds, although average around 600 pounds.

Salt water conditions.

Water level calculated around 5,335 feet. Several wells have produced some water but flow has been controlled and so far water not excessive.

Paraffin.

None.

Are wells shot?

No.

Artificial lifting conditions.

All wells flowing and no artificial lifting methods required as yet. However, as soon as conditions are determined and field outlined a pressure maintenance program will be undertaken.

GENERAL CONDITIONS

Principal leaseholders.

Humble Oil & Refining Co. and Gulf Production Co. jointly control approximately 6,000 acres, with bulk of field believed on this block. Humble, Gulf, The Texas Company, Magnolia Petroleum Co. and Shell Petroleum Corp. own smaller tracts to north of field.

Townsite possibilities.

None.

Character of leases.

Leases acquired in large block of fairly large ownerships. Purchase by Humble Oil & Refining Co. of Cullen & West's half interest involved consideration of $3,000,000 in cash and $17,000,000 to be paid out of oil with an additional overriding royalty.

Drilling restrictions.

Drilling restricted by Railroad Commission order to one well in 20 acres.

Operating companies October 1.

Humble Oil & Refining Co. and Gulf Production Co. jointly, these companies individually on smaller leases outside unit block and The Texas Company.

Gas production.

Gas production limited to amount necessary for fuel requirements and that amount necessarily produced in lifting of oil. No outlet for gas provided outside of field.

Gasoline plants.

No gasoline plants constructed.

Natural hazards.

None except high-pressure gas sands.

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will gladly discuss your mud and gas blow-out problems, without cost or obligation.

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Good Showing in Ward County Extension Well; New Producer Completed in the Penn Pool

By L. E. BREDBERG
Fort Worth Bureau, The Oil and Gas Journal

FORT WORTH, Tex., Oct. 17.—A good showing of oil and gas in an extension well of one of the Ward County areas and another producer for the Penn Pool were the principal events in the district during the week.

Maxwell and others' No. 1 Brillhart, in the northern part of Section 13, Block 34, H&T.C. Survey, Ward County, promises to extend production another mile to the northwest after obtaining a good showing of oil and gas from 2,436-42 feet. It is now shut down to pull big pipe, and it will be some time before casing is run and drilling resumed. Southern Ward County has been the most active area during the past two years, with several short extensions to the producing areas in this part of the county having been made within that time.

The Federal Court at San Antonio has granted an injunction to the McElroy Ranch royalty interests restraining the Railroad Commission, Gulf Production and Gulf Pipe Line Companies from putting the new proration orders into effect cutting production from 6,000 bbls. to 5,000 bbls. This is the first injunction obtained by royalty owners to prevent the commission and the producers and pipe line company from following the commission's orders. Three weeks ago the Mid-Kansas Oil & Gas Co. obtained an injunction to restrain the commission from curtailing production from 65,000 to 58,500 bbls. per day in the Yates Pool. This was the first injunction to be obtained against the commission pertaining to proration orders in West Texas. Since the new commission order cuts the field still further, to 55,000 bbls., the old injunction does not hold, and the company may not seek another order against the commission.

The McElroy Ranch has been producing 6,000 bbls. per day, but was recently ordered to be cut to 5,000 bbls.

Phillips Petroleum Co. and Tidal Oil Co.'s No. 1 Scharbauer, offset to the Skelly Oil Co.-Republic Production Co.'s northwest outpost of the Penn Pool, Ector County, promises to be the first producer completed in the pool in nearly two years. Pay was first encountered at 3,707-20 feet, and a second pay logged from 3,737-49 feet filled the hole 100 feet hourly with oil. Top of the first pay is 42 feet lower than top of the pay at 3,665 feet in the offset well, both wells having the same elevation, 2,932 feet. The offset well, completed in November, 1930, was given a 200-quart shot before put on production, and this new test will probably also be shot to disintegrate the tight lime in which production is found in this pool, which was discovered by the late Robert R. Penn of Dallas.

Production in the old Westbrook Pool, the first pool to be opened in West Texas, may be increased if treating experiments now being tried in the California Co.'s No. 10 Handley, in Section 12, Block 28, Township 1n, T.&P. Survey, prove successful.

Ranger and Wichita Falls

The Jarrett Oil Corp. of Oklahoma City is preparing to drill a 3,500-foot test, and probably will carry it on to 5,000 feet on the G. A. Scaling Ranch in Block 13, Abstract 216, H.T.&B. Survey. The company has an 8,500-acre block surrounding the location. This is in southwest Clay County, and is located on a surface structure 1 mile west of Scaling Oil Corp.'s No. 1 Scaling which was a deep test having several good showings of oil. It is also 6 miles southwest of the Nebraska-Tex test in the Carlton Thompson Survey, completed several years ago for a small well at 3,300 feet, and which is still producing.

Deep Oil Development Co.'s No. 1 First National Bank, north offset to the same company's No. 1 Munger, southwest Wichita County, now appears as a producer in the Strawn pay which showed oil at 3,693-96 feet, and an increase at 3,718-21 feet. No. 1 Munger is producing 89 bbls. per day on the pump.

Leidecker Brothers' No. 1 J. T. Rogers, in unproven territory in south Young County, had an important showing of oil at 3,425 feet and is now shut down, flowing from 1 to 2 bbls. of oil every 30 minutes, and making an estimated 500,000 feet of gas per day. It flows intermittently for two hours then stops for two hours. Elevation is 1,151 feet.

W. H. Metzner and others' No. 1 A. Thornberry, a wildcat test in Clay County, is appearing as a 12-bbl. well from oil sand logged from 198-200 feet, and from 340-54 feet. The owners, however, will pass up these showings and drill deeper, now underreaming casing to bottom preparatory to going ahead.

The city of Fort Worth will be interested in the Lewis Oil Corp.'s test which is on the Z. Boaz land in the most northerly northeast corner of the Joel Fish Survey, Tarrant County, near the town of Benbrook, approximately 8 miles southwest of Fort Worth. The company plans on drilling a 5,000-foot test on its block, and will use cable tools.

Wayne King and Krahenbuhl's No. 1 Ray, 1 mile northeast of Archer City, in the Kork Kelly Pool, struck a shallow pay sand at 1,100 feet and now looks like a producer.

Panhandle District

A temporary restraining order enjoining the Railroad Commission from enforcing its new proration orders against wells of the Danciger Oil & Refining Co. in the Panhandle district has been granted by the State Supreme Court. At the same time the court advanced on its docket application of the company for a writ of error testing the commission's right to prorate production in the company's wells in this district. A decision in the third Court of Civil Appeals had been favorable to the commission.

Indefinite postponement was made in Federal District Court on October 14, in the petition of the Dixon Creek Oil & Refining Co. asking for an injunction restraining the Railroad Commission from enforcing proration against the company's wells in Gray County. Attorneys for the company based their action on the alleged failure of the commission to enforce proration against the Danciger Oil & Refining Co.'s wells and offset wells, which, they charge, have been producing in violation of proration orders. The attorneys said they are willing to wait now until they can examine recent orders of the commission placing the Danciger wells on proration, and Danciger's subsequent injunction obtained in the State Supreme Court.

Wildcat Operations in West Texas

Week Ending October 17

Company, well, farm name, section and block—	Remarks—
BORDEN COUNTY	
Westyde Investment Co.'s No. 1 Looney, 990 ft. from S and E, Sec. 15, Blk. 31, Twp. 4n, T.&P. Sur.	S.D. 1,700 ft.
BREWSTER COUNTY	
Brewster Oil Co.'s No. 1 fee, 2,640 ft. S and 2,598 ft. E of NW cor., Sec. 45, Blk. G-15, G.C.&S.F. Sur.	S.D. 1,935 ft.
H. L. Chapman's No. 1 Skinner, C SW SE Sec. 100, Blk. 3, G.C.&S.F. Sur.	S.D. 1,303 ft.
Joiner's No. 1 McIntire, 853 ft. from S and 2,390 ft. from E, Sec. 31, Blk. 353, W. J. Mitchell Sur.	S.D. 240 ft.
Trans-Pecos Oil & Gas Co.'s No. 1 Jones, 930 ft. from N and 2,500 ft. from E of Sec. 18, Blk. G-15, G.C.& S.F. Sur.	S.D. 2,900 ft.
Van McPhail's No. 1 McIntyre, SE cor. Sec. 59, Blk. 353, 7 miles south Alpine	S.D. 1,750 ft.
CONCHO COUNTY	
Beesley et al's No. 1 Waring Estate, 400 ft. from N and E, Sec. 163, T.&N.O. Sur.	S.D. 2,300 ft.
Simmons et al's No. 1 Schultz, 150 ft. from W and center N and S of E half of J. Weber Sur., Abst. 154	S.D. 975 ft.
CROCKETT COUNTY	
Chambers et al's No. 1 Hoover, 1,650 ft. N and 330 ft. from E Sec. 1, Blk. FF, B.&B. Sur.	Location.
Doleman & Moore's No. 1 Perner, 2,135 ft. from N and 1,485 ft. from E of Sec. 36, Blk. 3, I.&G.N. Sur.	Spudded and S.D.
Stanolind Oil & Gas Co. et al's No. 1 Todd, 1,370 ft. from N and 1,320 ft. from E, Sec. 67, Blk. UV, G.C.&S.F. Sur.	Drlg. 5,540 ft.
The Texas Company's No. 1 B. B. Ingham, 330 ft. from S and 2,330 ft. from E line, Sec. 36½, I.&G.N. Sur.	Show gas 1,955 ft.; drlg. 1,980 ft
J. D. Young Co.'s No. 1 Shannon, 330 ft. from N and W, Sec. 35, Blk. 1, G.C.&S.F. Sur.	Fishing 235 ft.
CULBERSON COUNTY	
Harris & Haun's No. 1 fee	Drlg. 830 ft.
Milton-Dorsey's No. 1 Bigga, 4,181 ft. from N and 150 ft. from E, Sec. 2, Blk. 112, P.S.L. Sur.	Location.
DAWSON COUNTY	
Albaugh et al's No. 1 Robinson, C NW Sec. 46, Blk. M, E.L.&R.R. Sur.	Shut down.
ECTOR COUNTY	
Broderick & Calvert's No. 1 Parker, 330 ft. from N and W, Sec. 15, Blk. 44, Twp. 2s, T.&P. Sur.	Drlg. 4,425 ft.; show oil 4,381-95 ft.
Duffey et al's No. 1 Rutledge, 990 ft. from S, 330 ft. from E, Sec. 7, Blk. B-15	Drlg. 725 ft.
L. C. Harrison et al's No. 1 Addis, 330 ft. from N and 1,320 ft. from W, Sec. 35, Blk. 43, Twp. 2s, T.&P. Sur.	T.D. 3,690 ft.; drlg. out cement.
Phillips Pet. Co.'s No. 1 Scharbauer, 990 ft. from S and 330 ft. from W Sec. 43, Blk. 44, Twp. 2s, T.&P. Sur.	Drlg. 3,620 ft.
Thomas et al's No. 1 Edwards, 330 ft. from S, 2,310 ft. from E, Sec. 36, Blk. 43, Twp. 3s, T.&P. Sur.	S.D. 3,200 ft.; cleaning out to deepen.
T. F. Wurts' No. 1 E. A. Ibbetson et al, 330 ft. from N and E lines of NW Sec. 16, Blk. 46, Twp. 2s, G. M. M.Br.&A. Sur.	S.D. 3,605 ft
EL PASO COUNTY	
Tri-State Oil Co.'s No. 1 Bobadella, 1,325 ft. from S and E lines Sur. 254, S.F. No. 7,247	T.D. 3,190 ft.; fishing.
FISHER COUNTY	
Cranfill & Reynolds' No. 1 George, 400 ft. from N and 330 ft. from E, Sec. 300, Blk. 1, B.B.B.&C. Sur.	Fishing bailer 6,289 ft.
Southern Oil Co.'s No. 1 Purdue, 990 ft. from S and E Sec. 202, Blk. B, B.B.&C. Sur.	Drlg. 2,740 ft.
GLASSCOCK COUNTY	
Continental Oil Co.'s No. 2 Hart-Phillips, 660 ft. from N, 1,980 ft. from W, Sec. 34, Blk. 33, Twp. 2-s, T.&P. Sur.	S.D. 2,510 ft.; to run tubing and test.

(Continued on Page 46)

COMPLETIONS IN WEST TEXAS

Howard County

McCastin-Smith's No. 1 Roberts, dry and abandoned, total depth 1,351 feet. Pure Oil Co.'s No. 13 Chalk, top pay 1,636 feet, shot 10 quarts 1,631-42 feet, and 10 quarts 1,724-29 feet, initial production 28 bbls. in 10 hours, total depth 1,730 feet.

Loving County

Folbres-Evans' No. 1 Dean, top lime 4,155 feet, top pay 4,156 feet, shot 200 quarts from 4,170-4,250 feet, no results; rig moved off but hole not plugged, total depth 4,275 feet.

Pecos County

Cardinal Oil Co.'s No. 5-F Tippett, abandoned location. Hampton and others' No. 1 Byrne, show oil 1,356 feet, shot 10 quarts 1,356-77 feet, and 10 quarts 1,382-89 feet, dry and abandoned, total depth 1,395 feet.

Upton County

Crosby Production Co.'s No. 2 Lane, top salt 790 feet, top pay 2,305 feet, initial production 145 bbls. pumping, total depth 2,350 feet.

Ward County

Barnsdall Oil Co.'s No. 2 Henry, top salt 908 feet, top pay 2,490 feet, shot 20 quarts 2,487 feet and 20 quarts 2,510 feet, initial production 190 bbls., total depth 2,521 feet. Eastland Oil Co.'s No. 3 Weiss, abandoned location. Richardson and others' No. 10 O'Brien, top salt 1,155 feet, top pay 2,535 feet, initial production 185 bbls., total depth 2,780 feet.

COMPLETIONS IN PANHANDLE DISTRICT

Hutchinson County

Sinclair Prairie Oil Co.'s No. 12-B Johnson (old well deepened), old total depth 2,758 feet, no production, new total depth 2,814 feet, new pay 2,810-12 feet, initial production 17 bbls. oil and 15 bbls. of water, pumping.

Wheeler County

El Bor Corp.'s No. 1 Huselby, dry and abandoned, total depth 2,700 feet.

MOTOR CAR OUTPUT

September automobile production is estimated at 79,166 units, according to a report of the National Automobile Chamber of Commerce. This is a decline of 16 per cent from the total of 89,855 units produced in August and is 15 per cent below the September, 1931, production. Output for the first nine months of the year is put at 1,203,262, against 2,194,034 last year. A part of the decline in buying of new cars this year is attributed to the new taxes, according to the chamber. More people are stated to be buying used cars than new ones to avoid the tax.

Think Oil Theft Decreasing in East Texas Area; Fewer Tank Car Shipments; Less Trucks

By L. E. BREDBERG

DALLAS, Tex., Oct. 17.—With the oil theft investigation functioning as evidenced by the few tank cars of crude oil now being shipped out of the field, and the few trucks now hauling oil in the district, and allowable cut to 40 bbls. per well, operators in East Texas say there is a different outlook.

Representatives of pipe line companies operating in the field met at Dallas on October 16, purchasing companies practically assuring all unconnected leases an outlet. A subcommittee of three, composed of Jack Pew, chairman of the East Texas pipe line committee; B. C. Clardy of the crude oil purchasing department of the Shell Petroleum Corp., and George Goad, was appointed to look into the unconnected well situation and do all possible to get connections. Wells are to be connected to lines nearest to them, companies agreeing to take what connections are allocated to them. Others stated they would take additional connections. There are now approximately 270 unconnected wells in the field. The Humble Pipe Line Co. announced over the telephone that it could not handle any more outside connections.

Locations Increased

Locations increased this week, many of which were authorized before the new crude postings were announced. The Magnolia Petroleum Co. and Atlantic Oil Producing Co. have resumed activities, making almost 40 of the new locations. The former company had practically ceased operations for several weeks. Direct offsets and undrilled units are to be drilled regardless of the price being paid for crude.

There were 117 wells completed in the district this week, two wildcats being abandoned while only one wildcat location was staked. The location is L. J. Hopcroft and others' No. 1 J. R. Taylor, in the G. M. Doherty Survey, Cherokee County, 6 miles northwest of Maydelle.

Pure Oil Co. abandoned its No. 1 W. B. Nicholson in the Stewart Survey, Cherokee County, at a total depth of 4,435 feet. It topped the Pecan Gap from 3,170-3,590 feet and the Austin chalk from 4,030-4,220 feet.

Rains County Wildcat

The Rains County wildcat of Harris and others on the Markowitz farm in the Charles Velpolier Survey, 2 miles south of Emory, was abandoned this week at a total depth of 4,533 feet. Elevation is 448 feet. Woodbine sand was topped at 4,450 feet. Base of Austin 3,905 feet.

Lamar County Wildcat

Davy and others' No. 1 McCustian in the G. Wood Survey, Lamar County, is another wildcat abandoned this week. Total depth is 3,005 feet. Surface elevation is 526 feet.

Upshur County

Scott and Ashford's No. 1 Duphrates, located in the M. P. Del Torres Survey, Upshur County, was also abandoned. It topped the Woodbine sand at 3,748 feet, but failed to produce. Total depth is 4,074 feet.

The wildcat location of Wadley, Evans and others, on the W. S. Jones farm in the James Dunn Survey, just northwest of Jamestown, and approximately 4 miles northeast of three small outpost producers at the extreme north end of the field, showed 1 foot of saturated oil sand when a core was taken from 3,684-90 feet thereby appearing as a possible producer at the latter depth although two dry holes lie directly between the outpost producers and this test, making the possibilities of a producer appear small. Elevation of the test is 363 feet, making bottom of the hole minus 3,327 feet on subsea datum. Pipe has been cemented and it will be about a week before the plug is drilled and a test made.

Cherokee County

Hooper and others are preparing to clean out and deepen Clopton and others' No. 1 A. Pace in the Wesley Dikes Survey, northeastern Cherokee County, which was abandoned a few months ago at 3,665 feet, but which was not plugged. The well had showings of oil but drilled into salt water which prompted the owners to abandon it. Hooper believes a small producer can be made of the test by reworking it. He and his associates are planning a test approximately 1 mile to the north. These leases were formerly owned by the Shell Petroleum Corp. and Amerada Petroleum Corp. which subleased them to Mr. Clopton.

On the eastern side of the Lathrop area, Gregg County, the Tidal Oil Co. has abandoned its No. 14 Castleberry, which is within the producing limits of the field. It was given two shots in an effort to make a commercial producer, but they failed to accomplish their purpose. Total depth is 3,706 feet. A north offset location has been abandoned by the Sun Oil Co. Sand was topped in the Tidal test at 3,631 feet.

Franklin County

Harper and others' No. 1 Fee, in the W. M. Dawson Survey, western Franklin County, is running a liner prior to testing. Total depth of the hole is 3,404 feet. Before setting 5⅜-inch casing at 3,330 feet it had a hole full of water. A showing of oil was reported at near 3,363 feet, causing considerable interest to be taken in the test and the surrounding acreage. Another test is now drilling approximately 4,100 feet to the northwest, and is down to 2,505 feet. It logged base of the Austin at 2,505 feet. It is on the Ferguson farm in the Rogers Survey.

Think Thefts Stopped

Tank car shipments from the district have almost stopped, presumably due to illegally produced oil either by theft or overproduction being almost entirely checked by the investigation committee which has 40 men in the field in an effort to put a stop to theft and overproduction. Tank car shipments had been gaining for several weeks prior to the investigators going to work, until they had reached to around 10,000 bbls. per day. Now distribution reports do not show any tank car shipments although some oil is still being moved by this method, the railroads not electing to report their tank car movements to the pipe line scouts.

Wells Making Water

At the first of the month there were 144 wells in the field making various percentages of water, 46 of which were in the Joiner area, Rusk County; 60 in the Kilgore area, and 38 in the Lathrop area, Gregg and Upshur Counties. There were 145 pumping wells, and 7 which had to be agitated to make their allowable production. Sixteen tests drilled on the edges of the field have been plugged and abandoned. There are 14 "dead" wells in the district and 20 which cannot make their allowable production. These figures have to be changed practically every week as more tests are drilled on the edges, some of which show salt water, while others refuse to flow or make their daily allowable, and still others prove dry holes. There are 265 producers in the field which cannot make their daily allowable, which is now 40 bbls.

Kaufman County

George Anderson and M. Grubb's wildcat test on the W. W. Moody farm in the George Heider Survey, near Elmo in Kaufman County, is now standing shut down at 3,542 feet after having no oil or gas showings. It will probably be carried to the lower Woodbine sand.

Completions in East Texas

Cherokee County

Mid-Kansas Oil & Gas Co.'s No. 5 H. D. Kelley, top sand 3,702 feet, initial production 70 bbls. per hour on 2-inch lead, total depth 3,703 feet.

North Gregg County

Amerada Petroleum Corp.'s No. 6 A. Tooke, top sand 3,496 feet, initial production 19 bbls. in one-quarter hour through 1-inch tubing choke, total depth 3,526 feet. Arkansas Fuel Oil Co.'s No. 1 Killingsworth, location abandoned. Atlantic Oil Production Co.'s No. 9 H. Pritchard, top sand 3,498 feet, initial production 64 bbls. per hour through tapered tubing, total depth 3,523 feet. Atlantic and Sun Oil Co.'s No. 30 M. Hays, top sand 3,511 feet, initial production 65 bbls. per hour through tapered tubing, total depth 3,526 feet; No. 31 M. Hays, top sand 3,516 feet, initial production 65 bbls. per hour through tapered tubing, total depth 3,552 feet. Groveman & Dorian's No. 1 Rucker, top sand 3,550 feet, initial production 120 bbls. per hour through 1-inch tubing choke, total depth 3,609 feet. East Texas Refining Co.'s No. 3 Fisher, top sand 3,432 feet, initial production 50 bbls. per hour through 2-inch open tubing, total depth 3,463 feet. F.&M. Drilling Co.'s No. 4-A Blackstone, top sand 3,572 feet, initial production 45 bbls. in 20 minutes through 2-inch open tubing, total depth 3,602 feet. Howe's No. 33-B J. C. Judge, top sand 3,496 feet, initial production 65 bbls. per hour through tapered tubing, total depth 3,522 feet. Howe, receiver's No. 35-B J. C. Judge, top sand 3,496 feet, initial production 62 bbls. per hour through tapered tubing, total depth 3,518 feet.

Humble Oil & Refining Co.'s No. 5 L. Christian, top sand 3,630 feet, initial production 62 bbls. per hour through three-quarter inch tubing choke, total depth 3,670 feet; No. 5 G. W. Willingham, top sand 3,655 feet, initial production 53 bbls. per hour through three-quarter inch tubing choke, total depth 3,688 feet. Lechner & Hubbard's No. 1 N. Tuttle, top sand 3,562 feet, initial production 32 bbls. in one-quarter hour through open 2-inch tubing, total depth 3,590 feet. Lester & Duffield's No. 1 J. Moore, top sand 3,552 feet, initial production 45 bbls. in one-quarter hour through open 2-inch tubing, total depth 3,567 feet. Magnolia Petroleum Co.'s No. 5 Allen, top sand 3,702 feet, initial production 112 bbls. per hour through open 2-inch tubing, total depth 3,712 feet; No. 4 G. W. Tate, top sand 3,440 feet, initial production 110 bbls. per hour through open tubing, total depth 3,448 feet; No.

East Central Texas Wildcats

Week Ending October 17

ANDERSON COUNTY

Company, well, farm name, section and block—	Remarks:
Rosser and Pendleton's No. 1 M. A. Davy, 660 ft. from N line and center of E and W lines of tract and survey, P. G. Adams Sur.	Moved location.
C. R. Wilmuth et al's No. 1 N. B. Watson, 500 ft. from W line and 4,850 ft. from N of S line of survey in 8¼ of 129-ac. tract, M. Main Sur.	T.D. 1,538 ft.

ANGELINA COUNTY

W. J. Chandler's No. 1 L. J. Dearman, 350 ft. from S and W lines of 20-ac. tract, J. T. Peavy Sur.	S.D. 310 ft.
Hurlburt et al's No. 1 Long Bell Lumber Co., 160 ft. N and 200 ft. W of SE cor. of survey, H.T.&B. Sur.	Drlg. 2,720 ft.

BOWIE COUNTY

Roy Anderson's No. 1 Dykes, 2 miles W of Texarkana, M. Dykes Sur.	Coring 2,778 ft.
Burnham-Robertson and Greer's No. 1 F. O. Weiss, 850 ft. from N line and 200 ft. from W line of B. H. Williams 50-ac. tract, Jessie Dean Sur.	Coring 3,892 ft.

CHEROKEE COUNTY

Barkley Tate et al's No. 1 H. E. Neal, 330 ft. from N and W lines of tract, J. M. Prosella Sur.	Derrick.
Bridges and Candler's No. 1 Berryman, center of Berryman tract, H. Kimble Sur.	S.D. 1,000 ft.
Davis et al's No. 2 Annie Kelly, 631 ft. W of No. 1, M. De Los Santos Coy Sur.	Derrick.
Hooper et al's No. 1 Doctor Overton, 330 ft. from N and E lines of tract and 330 ft. out of most easterly NE cor. of survey, Wesley Dikes Sur.	Digging pits.
Hooper et al's No. 1 A. Pace (formerly Clopton), 288 ft. from N line and 330 ft. from most northerly E line of 40-ac. lease, Wesley Dikes Sur.	Moving in rig and preparing to clean out hole.
L. J. Hopcroft et al's No. 1 J. R. Taylor, 2,600 ft. from E line and 2,000 ft. from S line of survey, G. M. Doherty Sur.	Location.
Mid-Kansas Oil & Gas Co.'s No. 7 H. D. Kelley, 330 ft. from N and W lines of lease, M. D. L. S. Coy Sur.	Drlg. 1,839 ft.
Pure Oil Co.'s No. 1 W. B. Nicholson, 300 ft. from S and E lines of 72-ac. tract, R. Stewart Sur.	Coring 4,384 ft.; top Woodbine sand 4,223 ft.
Wilson & Stubbs' No. 1 L. Robert, 450 ft. from S and 150 ft. from W line of lease, J. B. Wolfin Sur.	S.D. 3,600 ft.

DELTA COUNTY

Commerce Oil Co.'s No. 1 Ablowich, 150 ft. from S line and 776 ft. from W line of H. D. Jewett 52-ac. tract, E. Chick Sur.	S.D. 3,813 ft.
Joiner et al's No. 1 Blackwell, 800 ft. S and 150 ft. from E lines of 275-ac. tract, Dunnetelle Sur.	S.D. 3,310 ft.

ELLIS COUNTY

Armstrong's No. 1 Milton Cook, SE cor. of 50-ac. tract, S. Frederick Sur.	S.D. 375 ft. (corrected)
Armstrong Bros.' No. 1 Reeves	S.D. 300 ft.

(Continued on Page 44)

WROUGHT IRON SHEETS

for Rig Houses now available for the oil country

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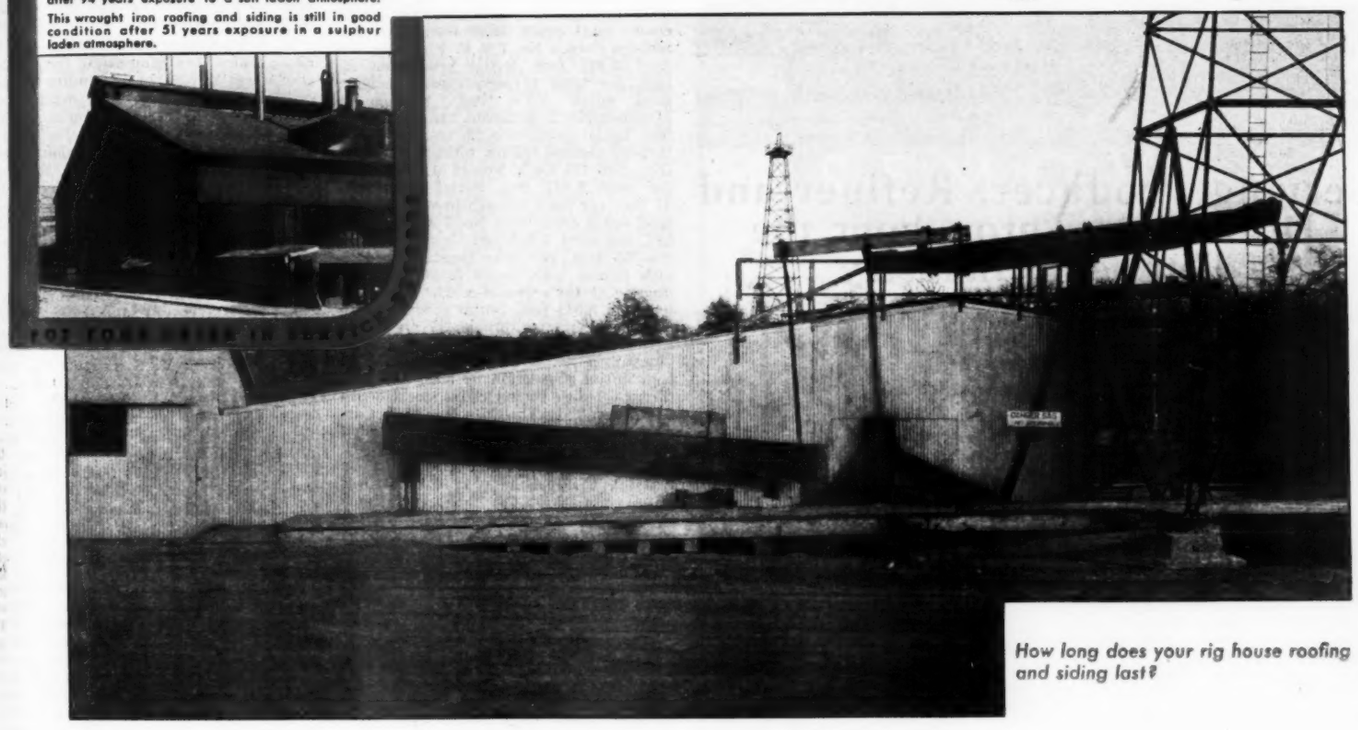
This wrought iron roofing and siding is still in good condition after 51 years exposure in a sulphur laden atmosphere.



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To get maximum life from rig house roofing and siding, be sure the sheets you specify are Byers Galvanized Genuine Wrought Iron. Entirely different from sheets of other galvanized metal, they are especially suited to such corrosive conditions as are found in west Texas and the Gulf Coast, for two apparent reasons. First, a base metal of the finest genuine wrought iron Byers has ever produced. Second, a heavier, more adhering coat of protective galvanizing.

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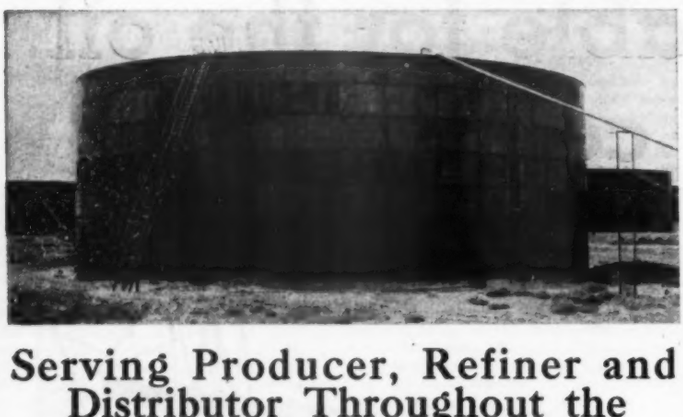

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Ask About the Graver Plan

GRAVER TANK & MFG. CORP

General Offices and Plant:

East Chicago . . . . . Indiana

STORAGE

and SPECIAL STEEL FABRICATION

8 H. B. Zeigler, top sand 3,436 feet, initial production 130 bbls. per hour through open 2-inch tubing, total depth 3,446 feet. Massie and others' No. 6 M. Fenn, top sand 3,569 feet, initial production 40 bbls. in one-half hour through 1-inch tubing choke, total depth 3,614 feet. H. S. Moss and others' No. 3 G. B. Tenery, top sand 3,578 feet, initial production 48 bbls. in 20 minutes through 2½-inch tubing choke, total depth 3,604 feet. McBride and others' No. 1 Tubbs, location abandoned. E. A. Payne and others' No. 1 R. M. Woods, top sand 3,605 feet, initial production 110 bbls. per hour through 1½-inch tubing choke, total depth 3,633 feet. Pilot Oil Co.'s No. 9 T. B. Harris, top sand 3,500 feet, initial production 45 bbls. in 20 minutes through open 2-inch tubing, total depth 3,525 feet.

Roeser & Pendleton's No. 5-B Nicholson, top sand 3,636 feet, initial production 100 bbls. per hour through open 2-inch tubing, total depth 3,647 feet; No. 3-A Satterwhite, top sand 3,660 feet, initial production 45 bbls. in one-half hour through three-quarter inch tubing choke, total depth 3,680 feet. Shell Petroleum Corp.'s No. 7 S. C. Fishburn, top sand 3,497 feet, initial production 25 bbls. per hour through tapered tubing, total depth 3,553 feet. Stroube & Stroube's No. 2 Anderson, top sand 3,502 feet, initial production 25 bbls. per hour through tapered tubing, total depth 3,541 feet. Sun Oil Co.'s No. 11 J. W. Akin, top sand 3,517 feet, initial production 37 bbls. per hour through tapered tubing, total depth 3,603 feet; No. 7 J. N. Campbell, top sand 3,475 feet, initial production 95 bbls. per hour through open 2-inch tubing, total depth 3,551 feet. Superior Oil Co.'s No. 8-A H. Pritchard, top sand 3,511 feet, initial production 45 bbls. in 13 minutes through 2½-inch open tubing, total depth 3,560 feet. The Texas Company's No. 6 Clark, top sand 3,588 feet, initial production 92 bbls. per hour through 1-inch tubing choke, total depth 3,664 feet. Tidal Oil Co.'s No. 14 J. Castleberry, top sand 3,631 feet, dry and abandoned, total depth 3,701 feet (D. Sanches Survey). Yount Lee Oil Co.'s No. 6-A I. Denson, top sand 3,633 feet, initial production 68 bbls. per hour through eleven-sixteenths inch tubing choke, total depth 3,653 feet; No. 6 F. Smith, top sand 3,552 feet, initial production 73 bbls. per hour through eleven-sixteenths inch tubing choke, total depth 3,572 feet.

South Gregg County

Atlantic Oil Production Co.'s No. 9-A Andrews, top sand 3,548 feet, initial production 65 bbls. per hour through open tapered tubing, total depth 3,570 feet; No. 7 Whaley, top sand 3,611 feet, initial production 65 bbls. per hour through open tapered tubing, total depth 3,619 feet. Barnsdall Oil Co.'s No. 4 J. Douglas, top sand 3,666 feet, initial production 105 bbls. per hour through three-quarters inch tubing choke, total depth 3,668 feet. Blue Star Oil Co.'s No. 3-H Sabine River, top sand 3,537 feet, initial production 75 bbls. per hour through three-quarters inch tubing choke, total depth 3,544 feet; No. 6-H Sabine River, top sand 3,523 feet, initial production 75 bbls. per hour through three-quarters inch tubing choke, total depth 3,545 feet. Carroll and Blain's No. 1 A. King, top sand 3,546 feet, initial production 50 bbls. per hour through three-quarters inch tubing choke, total depth 3,604 feet. L. C. Collins' No. 3-B Bivens, top sand 3,663 feet, initial production 45 bbls. in 30 minutes through open tubing, total depth 3,669 feet. Droppleman Development Co.'s No. 2 Lula Martin, top sand 3,724 feet, initial production 45 bbls. in 30 minutes through open tubing, total depth 3,728 feet. Doctor Duncan's No. 2 Duncan, top sand 3,598 feet, initial production 70 bbls. per hour through three-quarters inch tubing choke, total depth 3,601 feet. Burk Royalty Co.'s No. 2 D. Carr, top sand 3,454 feet, initial production 65 bbls. per hour through three-quarters inch tubing choke, total depth 3,482 feet.

Gulf Production Co.'s No. 46 Hilburn estate, top sand 3,556 feet, initial production 64 bbls. per hour through three-quarters inch tubing choke, total depth 3,568 feet; No. 15 W. Holt, top sand 3,553 feet, initial production 70 bbls. per hour through three-quarters inch tubing choke, total depth 3,568 feet. Titan Oil Co.'s No. 1 C. Dickson, top sand 3,531 feet, initial production 400 bbls. in 24 hours, total depth 3,587 feet. T. D. Humphrey's No. 8 A. Spear, top sand 3,539 feet, no production gauge, total depth 3,570 feet. Island Oil Co.'s No. 4 Register, top sand 3,576 feet, initial production 70 bbls. per hour through three-quarters inch tubing choke, total depth 3,586 feet. John Mabee's No. 3 M. T. Cole, top sand 3,541 feet, initial production 80 bbls. per hour through three-quarters inch tubing choke, total depth 3,552 feet; No. 4 M. T. Cole, top sand 3,546 feet, initial production 40 bbls. in 15 minutes through open tubing, total depth 3,554 feet. E. J. Radatz' No. 3 Sabine River, top sand 3,420 feet, initial production 30 bbls. in 15 minutes through open tubing, total depth 3,468 feet. Russell Petroleum Co.'s No. 2 M. T. Cole, top sand 3,591 feet, initial production 105 bbls. in 5½ hours through three-eighths inch tubing choke, total depth 3,597 feet.

Shell Petroleum Corp.'s No. 3-A J. S. Elder Laird, top sand 3,561 feet, initial production 13 bbls. in 30 minutes through open tapered tubing, total depth 3,588 feet; No. 8-A B. F. Laird, top sand 3,561 feet, initial production 15 bbls. in 30 minutes through open tapered tubing, total depth 3,595 feet; No. 4 M. J. Register, top sand 3,647 feet, initial production 15 bbls. in 30 minutes through open tapered tubing, total depth 3,668 feet. Sinclair Prairie Oil Co.'s No. 30 M. T. Cole, top sand 3,582 feet, initial production 44 bbls. in two hours through open tubing, total depth 3,584 feet. The Texas Company's No. 7 W. Davis, top sand 3,498 feet, initial production 105 bbls. per hour through open tubing, total depth 3,558 feet. Tidal Oil Co.'s No. 12 M. G. Barton, top sand 3,562 feet, initial production 20 bbls. in 10 minutes through open tubing, total depth 3,577 feet; No. 9 C. G. Strong, top sand 3,665 feet, initial production 18 bbls. in five minutes through 2-inch line on casing, total depth 3,674 feet. Whittle and Cavanaugh's No. 3 Watson, top sand 3,582 feet, initial production 44 bbls. in 21 minutes through three-quarters inch tubing choke, total depth 3,595 feet.

Gulf Production Co.'s No. 7-B C. E. Christian, top sand 3,639 feet, initial production 67 bbls. per hour through three-quarters inch tubing choke, total depth 3,643 feet; No. 6 Sexton Estate, top sand 3,621 feet, initial production 62 bbls. per hour through three-quarters inch tubing choke, total depth 3,684 feet; George Guthrie and others' No. 2 Mrs. George Perry, top sand 3,713 feet, initial production 52 bbls. per hour through 1-inch tubing choke, total depth 3,716 feet. Humble Oil & Refining Co.'s No. 41 L. D. Crim, top sand 3,616 feet, initial production 85 bbls. per hour through three-quarters inch tubing choke, total depth 3,643 feet; No. 45 L. D. Crim, top sand 3,618 feet, initial production 101 bbls. per hour through three-quarters inch tubing choke, total depth 3,660 feet; No. 18-B S. S. Laird, top sand 3,569 feet, initial production 45 bbls. per hour through three-quarters inch tubing choke, total depth 3,634 feet; No. 9-B H. Sexton, top sand 3,676 feet, initial production 32 bbls. in one-half hour through three-quarters inch tubing choke, total depth 3,782 feet. Frank King's No. 3 Scroggins, top sand 3,666 feet, initial production 15 bbls. in 10 minutes through three-quarters inch tubing choke, total depth 3,667 feet. Laytett Oil Co.'s No. 2 Robertson, top sand 3,618 feet, initial production 75 bbls. per hour through three-quarters open tubing, total depth 3,680 feet. Snider and Pradlin-Oliver's No. 1 Brightwell, top sand 3,634 feet, initial production 20 bbls. in 10 minutes through open tubing, total depth 3,645 feet. Sun Oil Co.'s No. 10 J. R. Beall, top sand 3,606 feet, initial production 45 bbls. per hour through tapered tubing, total depth 3,619 feet. Tidal Oil Co.'s No. 9-A J. S. Bean, top sand 3,575 feet, initial production 25 bbls. per hour through open 2-inch tubing, total depth 3,612 feet. Clint Wood Drilling Co.'s No. 2 Scroggins, top sand 3,640 feet, initial production 15 bbls. in 10

minutes through three-quarters inch tubing choke, total depth 3,645 feet.

South Rusk County

Arrow Refining Co.'s No. 3 Thrash, top sand 3,727 feet, initial production 75 bbls. in one-half hour through 2-inch open tubing, total depth 3,785 feet. Aston Oil Co.'s No. 7 J. R. Alford, top sand 3,621 feet, initial production 100 bbls. per hour through open 2-inch tubing, total depth 3,690 feet. J. Pollard's No. 3 Calvin Young, top sand 3,665 feet, initial production 90 bbls. per hour through 2½-inch open tubing, total depth 3,701 feet.

East Texas Refining Co.'s No. 4 John Hell, top sand 3,747 feet, initial production 44 bbls. per hour through tapered tubing, total depth 3,767 feet. F. H. E. Oil Co.'s No. 3-D M. L. Thompson, top sand 3,740 feet, initial production 44 bbls. in 40 minutes through 2½-inch open tubing, total depth 3,785 feet. Florence Oil Co.'s No. 3 Motley, top sand 3,798 feet, initial production 35 bbls. per hour through three-quarters inch tubing choke, total depth 3,799 feet. Gant and Garvin's No. 4 Moore, top sand 3,560 feet, initial production 42 bbls. per hour through open 2-inch tubing, total depth 3,643 feet; No. 6 Moore, top sand 3,557 feet, initial production 40 bbls. per hour through open 2-inch tubing, total depth 3,615 feet.

Humble Oil & Refining Co.'s No. 10-A Blackwell, top sand 3,650 feet, initial production 39 bbls. in one-half hour through three-fourths-inch tubing choke, total depth 3,655 feet; No. 6-C Ida Holt, top sand 3,732 feet, initial production 36 bbls. in one-half hour through three-quarters inch tubing choke, total depth 3,798 feet; No. 5-B Kangerga, top sand 3,657 feet, initial production 34 bbls. in one-half hour through three-quarters inch tubing choke, total depth 3,676 feet; No. 6 W. B. Key, top sand 3,697 feet, initial production 30 bbls. in one-half hour through tubing, total depth 3,702 feet; No. 20 W. L. Price, top sand 3,673 feet, initial production 32 bbls. in one-half hour through three-quarters inch tubing choke, total depth 3,763 feet; No. 22 W. L. Price, top sand 3,733 feet, initial production 43 bbls. in one-half hour through three-quarters inch tubing choke, total depth 3,812 feet; No. 6-A R. E. L. Silvey, top sand 3,686 feet, initial production 73 bbls. per hour through three-quarters inch tubing choke, total depth 3,761 feet; No. 11-A R. E. L. Silvey, top sand 3,728 feet, initial production 34 bbls. in one-half hour through three-quarters inch tubing choke, total depth 3,789 feet. Hunt Production Co.'s No. 6-B Bradford, top sand 3,574 feet, initial production 44 bbls. in three hours pumping, total depth 3,670 feet; No. 10-C R. W. Fair, top sand 3,619 feet, initial production 40 bbls. in one-quarter hour through 2-inch open tubing, total depth 3,633 feet; No. 10-C Young, top sand 3,668 feet, initial production 44 bbls. in 22 minutes through 2-inch tubing, total depth 3,736 feet. E. O. N. Johnson's No. 2 Z. Bradford, top sand 3,625 feet, initial production 52 bbls. per hour through open 2-inch tubing, total depth 3,716 feet. R. J. McMurray's No. 1-C Blackwell, top sand 3,624 feet, initial production 44 bbls. in one-quarter hour through 2-inch open tubing, total depth 3,648 feet. M. B. G. Oil Co.'s No. 5 H. L. Griffin, top sand 3,570 feet, initial production 65 bbls. per hour through open 2-inch tubing, total depth 3,679 feet.

Mid-Kansas Oil & Gas Co.'s No. 5 Clay heirs, top sand 3,575 feet, initial production 20 bbls. per hour through 2-inch lead, total depth 3,689 feet; No. 34 W. T. Grissom, top sand 3,620 feet, initial production 130 bbls. per hour on 2-inch lead, total depth 3,658 feet; No. 5 George Moore, top sand 3,658 feet, initial production 108 bbls. per hour on 2-inch lead, total depth 3,658 feet; No. 11 M. A. Price, top sand 3,553 feet, initial production 98 bbls. per hour on 2-inch lead, total depth 3,640 feet. George Ray's No. 5 Pinkston, top sand 3,590 feet, initial production 30 bbls. per hour through open 2-inch tubing, total depth 3,611 feet. W. F. Reynolds' No. 1 H. Stoddard, top sand 3,527 feet, initial production 75 bbls. per hour through open casing, total depth 3,646 feet. Sinclair Prairie Oil Co.'s No. 10-A Tipps, top sand 3,619 feet, initial production 65 bbls. in one-half hour through open 2½-inch tubing, total depth 3,623 feet. Stanolind and Pure Oil Co.'s No. 31 W. H. Siler, top sand 3,625 feet, initial production 46 bbls. in 42 minutes through 2½-inch open tubing, total depth 3,701 feet; No. 35 W. H. Siler, top sand 3,635 feet, initial production 44 bbls. in 55 minutes through three-quarter inch tubing choke, total depth 3,676 feet.

Smith County

Sun Oil Co.'s No. 12 J. D. Henson, top sand 3,663 feet, initial production 54 bbls. per hour through tapered tubing, total depth 3,675 feet. The Texas Company's No. 4-B A. S. Jarvis, top sand 3,656 feet, initial production 80 bbls. per hour through open 2-inch tubing, total depth 3,656 feet. Alph Tillman and others' No. 1 Jessie Cole, top sand 3,760 feet, initial production 120 bbls. per hour through open 2-inch tubing, total depth 3,761 feet.

Upshur County

Conservative Oil Co.'s No. 9 O. M. Victory, top sand 3,660 feet, initial production 75 bbls. per hour through three-quarter inch tubing choke, total depth 3,686 feet. East Mountain Production Co.'s No. 2 Shelton, top sand 3,758 feet, initial production 150 bbls. per hour through open 2-inch tubing, total depth 3,761 feet. Feazel & Davenport's No. 6 Phillips, top sand 3,634 feet, initial production 30 bbls. in one-quarter hour through 1-inch tubing choke, total depth 3,647 feet. Humble Oil & Refining Co.'s No. 5-B E. O'Byrne, top sand 3,636 feet, initial production 12 bbls. in one-quarter hour through three-quarter inch tubing choke, total depth 3,647 feet; No. 13 I. D. Smith, top sand 3,571 feet, initial production 88 bbls. per hour through three-quarter inch tubing choke, total depth 3,591 feet. Scott & Ashford's No. 1 Duphrates, top sand 3,748 feet, dry and abandoned, total depth 4,074 feet (M. P. Del Torres Survey). Simms and Stanolind Oil & Gas Co.'s No. 22-B J. J. Flewellen, top sand 3,777 feet, initial production 80 bbls. per hour through 2½-inch open tubing, total depth 3,783 feet. Sorrells & Owens' No. 1 J. W. Free, top sand 3,680 feet, initial production 75 bbls. in 24-hour pumping, total depth 3,695 feet. Sun Oil Co.'s No. 8 J. Hargroves, top sand 3,705 feet, initial production 20 bbls. per hour through 2-inch open tubing, total depth 3,708 feet. Turnbow and others' No. 1 D. C. Shelton, location abandoned.

WILDCAT COMPLETIONS

Rains County

Harris and others' No. 1 Markovitz, dry and abandoned, total depth 4,533 feet, top Pecan Gap 2,243 feet, base 2,350 feet, top Austin chalk 3,518 feet, base 3,905 feet, top Woodbine sand 4,450 feet.

Lamar County

Davy and others' No. 1 McGustian, dry and abandoned, total depth 3,605 feet, elevation 526 feet.

Van Pool—Van Zandt County

Pure Oil Co.'s No. 2 Wylie Enas, initial production 85 bbls. first 24-hour gauge after choked for proration, total depth 2,976 feet; No. 3 A. D. Clark, initial production 77 bbls. first 24-hour gauge after choked for proration, total depth 2,917 feet; No. 4 G. C. Stewart, initial production 100 bbls. first 24-hour gauge after choked for proration, total depth 2,951 feet. The Texas Company's No. 7 R. A. Tunnell, initial production 110 bbls. first 24-hour gauge after choked for proration, total depth 2,938 feet.

HOWARD B. OURSLER SLAIN

Howard B. Oursler, formerly in charge of the salvage department of the Marland Oil Co. at Ponca City, Okla., but recently a Federal prohibition agent at Muskogee, was shot dead while questioning a suspect at Stillwell, Okla. His former home was in Pittsburgh, Pa., where he was at one time city paymaster.

COOLING WATER TREATMENT

In prevention of scale deposits or corrosion in combustion engines, compressors, condensing equipment and water lines, the Dearborn Chemical Company offers a reliable service. The cost is low. There is no expensive equipment to buy. A gallon sample of the cooling water is required for analysis and recommendations will be submitted without cost.

RAPID—EASY SCALE REMOVAL

Where Diesel engine jackets, water lines, boilers, heaters, condensers, and general water handling equipment build up scale, under conditions where it is not practical to treat the water, the scale should be removed periodically to maintain efficiency and capacity. For fast, thorough removal of carbonate scale, Dearborn Special Formula No. 134 is unsurpassed. It is used extensively and will remove scale of any thickness. Send us sample of scale or water for analysis without cost; describe equipment and thickness of scale. Recommendations will be submitted promptly.

BOILER WATER TREATMENT

Dearborn methods have been based upon laboratory analysis of water supplies ever since we pioneered in the field of scientific water correction nearly fifty years ago. The reagents combined in the treatment supplied were chosen in the beginning from the most effective treating materials available. As research and experience from time to time have discovered more effective means and materials they have been incorporated in and made a part of Dearborn Methods. This will continue to be our plan. In the full range of water troubles widely varying conditions are encountered and no single formula or method of handling could possibly meet all situations. The Dearborn organization will continue to devote its best energies, as always, to finding a true analysis of the problem at hand and combating the trouble with the proper weapons. Gallon sample of feed water is required. Analysis and recommendations made without charge.

DEARBORN CHEMICAL COMPANY

"A House of Chemical Engineers" In Its Forty-sixth Year of Service to Industry

310 S. Michigan Ave., Chicago **807 Mateo St., Los Angeles**
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Dearborn

Large Yield of High Octane Gasoline Obtainable From Low Gravity Lost Soldier Crude Oil

By EDWIN F. NELSON and GUSTAV EGLOFF
Universal Oil Products Co.

Wyoming ranks first among the oil-producing states in the Rocky Mountain group. Five oil-bearing basins are located in the State, each a separate formation. Powder River basin, containing 10 oil pools, Big Horn basin 15 pools, and Wind River basin 13 pools are located in the central part of Wyoming. Green River basin, in the southwestern part of the State, includes 11 pools; and the smallest basin, Laramie, with four pools, is in the southeastern part of the State.

Oil seepages have been described in Wyoming as early as 1844. The first production began in 1906 and assumed magnitude in 1914. Production is obtained in Wyoming from at least 12 different horizons ranging from the shallowest, the Steele horizon of Cretaceous age, to the deepest or Madison formation of Mississippian age. This last is older than Pennsylvanian and is productive only in the Frannie Pool of the Big Horn basin.

The most prolific producing horizon is the Frontier formation of early Cretaceous age, and ranking second, the Dakota horizon of very early Cretaceous age. Other important formations, all older than the Frontier and Dakota, are the Lakota of the Commanchean period; the Sundance formation of Jurassic age; the Embar of Permian age, and the Tensleep formation of Pennsylvanian age.

Salt Creek Pool in Natrona County (Powder River basin) is the most productive pool in the State. Grass Creek in Big Horn basin and Big Muddy in Powder River basin rank second and third. Other important pools in Wyoming are: Lost Soldier and La Barge in Green River basin; Rock Creek, Poison Spider and Hudson in Wind River basin; Hamilton and Elk Basin in Big Horn Basin, and Lance Creek, Teapot Dome, Mule Creek and Osage in Powder River basin.

Table 1 gives the analysis of typical oil from representative Wyoming pools.

Lost Soldier Field is located in Carbon County, in the south central part of Wyoming, about 25 to 40 miles north of Rawlins. The district shows no surface indications of either oil or gas. After geologists reported the presence of well developed domes in the subsurface structure of the region, however, test wells were drilled and oil was struck in 1916.

Lost Soldier crude oil is an excellent cracking stock producing a 79 octane number gasoline representing 60 per cent of the crude, with a flashed residue meeting Bunker B specifications.

Cracking of Lost Soldier Crude Oil

Crude oil from Lost Soldier Field showed the following characteristics:

Gravity	29.4
Flash (C.O.C.), ° F.	110
Fire (C.O.C.), ° F.	170
Flash (Pen. Mar.), ° F.	85
Vis. (Furol @ 77° F.), sec.	34
Sulphur, per cent	0.18
Cold test, ° F.	60
B.S.&W., per cent	0.9
Water, per cent	Trace
Init. B.P., ° F.	203

A.S.T.M. 100 cc. Distillation

Per cent distilled over	Temp., ° F.
5	330
10	414
20	513
30	564
40	610
50	660
60	692
70	712
80	719
Per cent over	98.5
Per cent coke by wt.	1.3
Per cent @ 437° F.	12.0
Per cent @ 572° F.	32.0

The crude oil contained 7.5 per cent of a naphtha fraction which had an octane number of 71. The naphtha analyzed as follows by means of the A.S.T.M. 100 cc. distillation method:

A.P.I. grav.	49.0
Color	30+
Doctor	Negative
Sulphur, per cent	0.02
Octane number	71
I.B.P., ° F.	193

Per cent distilled over	° F.
10	232
20	246
50	280
90	349
Endpoint	398

The Lost Soldier crude oil was subjected to the cracking process, using the flash method of continuous operation. The crude, treated in its entirety, yielded 60 per cent of gasoline of 79 octane number.

TABLE 1—ANALYSES OF TYPICAL WYOMING CRUDES

	Wind River Basin		Green River Basin					Big Horn Basin
	So. Casper Creek	Poison Spider	Lander	Maverick Springs	Ferris	Lost Soldier	Oregon Basin	Frannie
A.P.I. gravity	13.0	19.3	22.4	20.2	25.0	29.4	22.2	23.0
Flash (Cleveland open cup), ° F.	200	90	...	185	...	...	...	...
Fire (Cleveland open cup), ° F.	240	140	...	205	...	...	...	...
Cold test, ° F.	14	36	..	...	...	...	...	...
Furol vis. @ 77° F., sec.	...	120	...	84	...	...	...	...
Furol vis. @ 122° F., sec.	150	34	...	...	...	...	...	...
B.S.&W. (benzol), per cent	0.5	0.2	...	..	...	...	...	...
Water, per cent	Trace	Trace	Trace	...	.3	Trace	0.6	...
Coke, per cent by weight	16.3	12.8	7.8	7.4	7.0	1.3	9.5	6.1
Sulphur, per cent	4.78	3.19	2.9	2.78	0.23	0.18	3.22	2.49
A.S.T.M. 100 cc. Distillation								
Init. B.P., ° F.	...	...	230	385	300	203	130	116
Per cent distilled over	Temperature, ° F.							
10	506	418	445	485	465	414	...	366
20	608	508	523	575	550	513	...	384
30	644	600	596	647	615	564	...	496
40	640	646	635	702	675	610	...	580
50	648	652	662	725	700	660	...	652
60	642	642	675	732	710	675	...	676
70	660	660	665	725	705	692	...	687
80	668	660	670	710	718	712	...	696
90	...	590	...	.	707	719	.	732
Endpoint	668	664	721	733	730	...	720	732
Per cent over @ 410° F.	...	8.5	7.5	2.5	6.0	9.5	...	22.5
Per cent over @ 437° F.	...	14.0	...	...	8.0	12.0	...	34.5
Per cent over @ 572° F.	17.0	28.0	27.0	19.5	23.0	32.0	32.0	39.0

The operating conditions and the yields of products obtained from cracking Lost Soldier crude oil were as follows:

	Run No. A (operating conditions)	Run No. B
Pressure, lbs./sq. in.	250	250
Temperature, ° F.	950	950
Gasoline (per cent of crude)	60.3	59.9
A.P.I. gravity	58.0	57.7
10 per cent over, ° F.	141	134
50 per cent over, ° F.	267	270
90 per cent over, ° F.	363	367
Octane number	79	79
Flashed residuum (per cent of crude)	32.8	35.7
A.P.I. gravity	11.3	12.3
B.S.&W., per cent	1.0	0.8
Vis. Furol @ 122° F.	33	39
Gas and loss (per cent of crude)	6.9	4.4
Gas (cu. ft./bbl. of crude)	421	384

The gasoline obtained by cracking the crude oil in its entirety showed the following distillation characteristics according to the A.S.T.M. 100 cc. distillation method:

	Run No. A	Run No. B
A.P.I. gravity	56.2	57.5
Sulphur, per cent	0.03	0.03
Octane number	79	79
Per cent distilled over	Temp., ° F.	
Init. B.P.	106	99
5	141	141
10	160	154
20	191	190
30	220	221
40	243	240
50	267	276
60	290	291
70	310	314
80	336	340
90	363	367
Endpoint	395	396
Per cent over	94.0	94.0
Octane number	79	79

The flashed residuum from the cracking of Lost Soldier crude had the following properties:

	Run No. A	Run No. B
A.P.I. gravity	12.3	11.9
Flash (Cleveland open cup), ° F.	225	240
Fire (Cleveland open cup), °F.	315	340
Furol viscosity @ 122° F., sec.	29	34
Cold test, ° F.	10	15
B.S.&W., per cent	0.8	0.8
I.B.P., ° F.	444	423
Per cent over at 572° F.	14.0	9.0

ROCKY MOUNTAIN RUNS

Average daily pipe line runs from fields in the Rocky Mountain territory for the week ending October 15 follow:

	Bbls.
WYOMING	
Salt Creek	20,940
Big Muddy	1,930
Badger Basin	40
Byron-Garland	990
Byron (East)	100
Dallas-Derby	470
Dutton Creek	80
Ferris	20
Frannie	150
Grass Creek	1,200
Hamilton Dome	870
Hudson	350
LaBarge	590
Lance Creek	110
Lost Soldier	2,300
Midway	120
Oregon Basin	290
Osage	1,050
Pilot Butte	80
Rock River	1,000
Poison Spider	80
Teapot	90
Total Wyoming	32,010
MONTANA	
Buckley-Border	620
Cat Creek	840
Cut Bank	70
Dry Creek	540
Kevin-Sunburst	4,130
Lake Basin	30
Ponderay	1,140
Total Montana	7,370
COLORADO	
Florence	310
Fort Collins and Wellington	700
Iles Dome	580
Moffat	650
Orchard	290
Rangely	50
Tow Creek	270
Total Colorado	2,690
NEW MEXICO	
Artesia	370
Caprock	580
Hogback	410
Jal	1,070
Rattlesnake	990
Table Mesa	80
Eunice	540
Hobbs	24,990
Lea	2,000
Texas-Pacific	80
Total New Mexico	31,130
Total Rocky Mountain area	73,200
Total previous week	73,761
Difference	557

The Oil Man's Calendar

October

(?) —Chicago, Ill., American Society of Mechanical Engineers (fuel division).

November

2-4—Indianapolis, Ind., Indiana Petroleum Association, Hotel Severin.

10—Los Angeles, Calif., California Natural Gasoline Association.

10-12—Atlanta, Ga., Southeastern Economic Conference.

14—Tulsa, annual meeting, Independent Petroleum Association of America, 10 a. m., Mayo Hotel.

15-17—Houston, Tex., thirteenth annual meeting, American Petroleum Institute.

December

5—New Orleans, La., tenth annual Asphalt Paving Conference, and Association of Asphalt Paving Technologists.

5-9—New York, N. Y., American Society of Mechanical Engineers.

9—Annual meeting, Independent Petroleum Association of Texas, Fort Worth.

5-10—New York, N. Y., National Exposition of Power & Mechanical Engineering.

6-8—Omaha, Neb., Nebraska Petroleum Marketers, Hotel Fontenelle.

(?) —Great Falls, Mont., Rocky Mountain Oil and Gas Association, Rainbow Hotel.

1933

January

9-10—Fargo, N. Dak., Annual Convention, Northwest Petroleum Association, North Dakota Division, Waldorf Hotel.

12-13—St. Paul, Minn., Annual Convention, Northwest Petroleum Association, Minnesota Division, Lowry Hotel.

February

15-17—Columbus, Ohio, Ohio Petroleum Marketers Association, Deshler-Wallick Hotel.

March

23-25—Houston, Tex., American Association of Petroleum Geologists.

April

20-21—Cleveland, Ohio, National Petroleum Association, Cleveland Hotel.

June

26-30—Chicago, Ill., annual meeting, American Society for Testing Materials, Stevens Hotel.

Don't forget

to sell the saucer —with the cup!

YOU would think it rather foolish to buy a cup without the saucer—but you are doing this very thing when you let the motorist who buys nothing but gasoline slip by—what better prospect could you have for a crankcase drain or a grease job, and what more logical time could you ask for, to sell him a set of tires, or to remind him that you have a full line of plant sprays and insecticides? Every customer is a prospect for the full line of products identified by the Blue BE SQUARE—They must buy these products and accessories somewhere . . . *why not at* YOUR *station?* Investigate—Get in touch with our office nearest you and remember back of each Barnsdall product is the experience and resources of the World's FIRST Refiner.

STABILIZED MOTOR OIL

Meet the most severe test of motoring and driving conditions regardless of temperature changes.

GASOLINES KEROSENES

Super-Gas ETHYL, the luxurious motor fuel of extra power for acceleration in traffic . . . mileage on the highway . . . and power for the hills. Be Square Gasoline and Barnsdall Kerosenes 41-43° and 42-44° Gravity refined to a higher grade than the most exacting state specifications.

GREASES

Barnsdall Greases are specially designed for their specific use of uniform high quality.

TIRES AND TUBES

All standard first class quality, sold at a popular price triple tested, and with an iron-clad guarantee that protects the purchaser.

INSECTICIDES

Barnsdall Non-Poisonous Plant Spray — Concentrated Cattle Spray — Fly Killer, a non-poisonous product, and Mothene, the non-poisonous moth killer.

NAPHTHAS AND SOLVENTS

The BARNSDALL 3 to 5 Year Plan of Lubrication asks the question

[redacted]

BARNSDALL answers it for Be Square Jobbers and Dealers with new extra profits

THE WORLD'S ~~first~~ REFINER

Barnsdall

A Dependable Source of Supply

Refineries: BARNSDALL, OKMULGEE, WICHITA *Sales Offices:* TULSA, CHICAGO, NEW YORK, ST. LOUIS, KANSAS CITY, MILWAUKEE, OMAHA, COUNCIL BLUFFS, TOLEDO, ST. PAUL, MINNEAPOLIS, LOS ANGELES, SAN FRANCISCO

Chicago Marketers Do Not Agree on Remedial Measures

(Continued from Page 22)

cents. However, there is no consideration of this sort in the lighter fuel oils and the distillates. Monday found practically all sources out of the 28-30 zero markets as well as tight in the matter of 32-36 and 38-40 straw distillates. With 38-40 prime white distillate, these materials are clustered close to the kerosene prices. Representative quotations by Shell, Sinclair and Empire follow: 28-30 zero fuel oil, advanced from a range of 80 and 90 cents, to a range of 90 cents and $1; 26-28 zero fuel oil, advanced from 75 cents to 80 cents; 22-26 zero, advanced from a range of 60 and 65 cents, to a range of 65 to 70 cents; 18-22 zero, advanced from a range of 47½ and 50 cents, to a range of 50 to 55 cents; below 18 gravity zero fuels averaged a range of 40 to 45 cents, an advance of 5 cents per barrel. The 32-36 industrial gas oil was advanced an eighth of a cent a gallon to a range of 1⅞ to 2 cents. The 27-28 straw material of 215° flash-point, 50 @ 100° vis., and 50 below cold test was quoted at 2⅝ cents. A little 38-40 prime white distillate was offered for resale at 3⅛ cents. Distillate prices Monday were: 3⅛ to 3¼ cents on the 38-40 light straw, 3 to 3⅛ cents on the 38-40 straw, and 2¾ to 2⅞ cents on the 32-36 straw. These represent advances of an eighth of a cent.

Gasoline Market Sentiment Improves on East Coast

(Continued from Page 23)

4⅜ cents per gallon, but are still about three-eighths under the price at which holders are willing to sell. The contemplated cargo is for lifting late this month or during November.

East Texas crude sellers have advanced their quotations and are now quoting $1.05 to $1.10 per barrel, f.o.b. Gulf. A cargo for France which was all but closed at 96 cents prior to the increase in posted prices in the field has been withdrawn.

Rumanian sellers have advanced their f.o.b. Constanza quotations as follows: Gasoline, 730 gravity, $16.89 per ton, up 23 cents; gasoline, heavy, $12.51 per ton, up 14 cents; gas oil, $6.92 per ton, up 3 cents. Other products remain unchanged.

Petroleum Exports

Conditions in the local export market showed little material change during the past week, and export shipments continued to be held down mostly to routine quantities.

The following table shows exports of principal refined products for the past three weeks (all figures in gallons unless otherwise noted):

	Week ended—		
	Oct. 8	Oct. 1	Sept. 24
Gasoline	40,000	70,000	95,000
Naphtha	55,000	300,000	295,000
Kerosene	9,000	60,000	17,000
Fuel and gas oil	14,000	12,000	10,000
Lubricating oil	570,000	718,000	650,000
Petroleum, refined	390,000	230,000	210,000
Petrolatum		16,000	
Paraffin wax	2,095,000	1,125,000	775,000
Refined	140,000	226,000	470,000
Scale	612,000		27,000
Lubricating grease	540,000	615,000	910,000

With the crude price schedule in the Southwest showing renewed firmness, the price outlook for refined products is more optimistic, and export operators who had been holding off the market in anticipation of further price recessions on products are now beginning to conduct their buying operations with a little more freedom. Lub oils were coming in for a better inquiry last week, and export demand for cased gasoline and kerosene was also along somewhat broader lines. More foreign inquiry for paraffin wax was also reported, with much of the demand for this product centering on crude scale, although semi and fully refined grades were in limited demand.

Imports

Imports of crude and refined petroleum at the principal United States ports for the week ended October 8 totaled 832,000 bbls., a daily average of 118,557 bbls., compared with 373,000 bbls., a daily average of 53,286 bbls., for the previous week, and a daily average of 99,821 bbls. for the four weeks ended October 8. Details follow:

(Barrels of 42 Gallons)

At Atlantic Coast Ports—	
Baltimore	65,000
New York	471,000
Philadelphia	296,000
Total	832,000
Daily average	118,857
Daily average four weeks	99,821

The week's imports consisted of 62,000 bbls. of gasoline, 621,000 bbls. of crude petroleum, and 149,000 bbls. of fuel oil.

California Oil Receipts

Receipts of California crude and refined petroleum at Atlantic Coast ports during the week ended October 8 (there were no receipts at the Gulf) amounted to 147,000 bbls., a daily average of 21,000 bbls., as compared with 237,000 bbls., a daily average of 33,857 bbls., for the previous week and a daily average of 30,571 bbls. for the four weeks ended October 8. All of the week's receipts were of gasoline, 123,000 bbls. arriving at New York and 24,000 bbls. coming into other ports.

At the close of the week, there were five cargoes of California petroleum reported afloat for East Coast ports, as follows:

For New York—75,000 bbls. of gasoline on the tanker Solana (Associated Oil Co. boat).

For Tiverton, R. I.—78,000 bbls. of kerosene on the tanker Pat Doheny (Richfield Oil Co. boat); and 78,500 bbls. of gasoline on the tanker Deroche (Union Oil Co. of California boat).

For Wilmington, Del.—55,000 bbls. of gasoline on the tanker Arizona (The Texas Company boat).

For Sewaren, N. J.—81,000 bbls. of gasoline on the tanker Meton.

East Central Texas Wildcats

(Continued from Page 38)

Armstrong Bros.' No. 1 John Lee Winn, 1,650 ft. from E and 150 ft. from S of Orland, Orlo Wheeler Sur. ....S.D. 1,485 ft.

Clark Brooks' No. 1 Anderson, SE cor. of 3,900-ac. tract, 10 miles SW of Wachatchie, E. C. Branch Sur. .....S.D. 1,050 ft.

Paris Oil Co.'s No. 1 O. S. Bain, 1,500 ft. from S line and 300 ft. from W line of 60-ac. lease, R. M. Williams Sur. .....Drlg. 980 ft.

FRANKLIN COUNTY

Tom Harper's No. 1 fee, 150 ft. from N line and 300 ft. from E line of 116-ac. tr., W. M. Dawson Sur. ....Drilled plug; prepare to set liner; T.D. 3,330 ft.

Fred Price et al's No. 1 Mattie E. Ferguson, 150 ft. from S and W lines of tract and survey, Z. Rogers Sur. .....Drlg. 500 ft.

FREESTONE COUNTY

Clyde Creighton's No. 1 Holley Bros., 854 ft. from W line and center of N and S lines of lease, A.B.M. Sur. .....S.D. 3,669 ft.

GREGG COUNTY

Arkansas Fuel Oil Co.'s No. 1 E. Killingsworth, 330 ft. from N and W lines of lease, William Robinson Sur. .....Location.

W. E. Barker et al's No. 1 Richey, 122 ft. from N line and center of E and W lines of lease, William Carlton Sur. .....Waiting on cmt. to set; T.D. 3,592 ft.

Jack Berry's No. 2 G. Davis, 150 ft. from S line and center of E and W lines of lease, W. P. Chisum Sur. .....Rig up.

D. F. Buffington's No. 1 S. L. Dansby, 150 ft. from S line and 1,700 ft. from E line of 30-ac. lease, W. P. Chisum Sur. .....Drlg. 2,737 ft.

Cap Rock Oil & Gas Co.'s No. 1 Mrs. N. Crane, center of 1.84-ac. tract, M. V. Winkle Sur. .....Testing; T.D. 3,585 ft.

Carroll and Blaine's No. 1 A. King, 200 ft. E of No. 1 S. King, M. V. Winkle Sur. .....Testing 3,504 ft.

C. M. Cope's No. 1 Doctor Crane, 50 ft. out of NW cor. of S half of Blk. No. 139, M. V. Winkle Sur. ..Waiting on cmt. to set 3,490 ft.

Corbin et al's No. 1 A. H. Tubbs, 330 ft. from S and W lines of 50-ac. lease, D. Sanches Sur. .....S.D. 3,598 ft.

Delta Drilling Co.'s No. 2 Hughey-Ross, N offset to Hall's No. 1 Dixon, J. Hilliard Sur. .....Drlg. 2,400 ft.

Drilling Exploration Co.'s No. 1 Hamon, 183 ft. N and 46 ft. W of most easterly NE cor. of Stanolind's Cox and Hamon lease, W. H. Castleberry Sur. .....Moving in derrick.

East Texas Oil Co.'s No. 2 J. W. Fuller, 350 ft. from S line and 300 ft. from E line of 22-ac. lease, D. Sanches Sur. .....Drlg. 3,715 ft.

East-Whaley Oil Co.'s No. 1 Elder, 60 ft. from N line and 100 ft. from E line of Blk. No. 19, M. V. Winkle Sur. .....Waiting on cmt. to set; T.D. 630 ft.

Lewis Godlin's No. 1 E. L. Walker, 330 ft. N of road, 330 ft. from E line of 80.2-ac. tract, M. Dillard Sur...Derrick.

Guinn Petroleum Co.'s No. 1 J. S. and F. Elder, 200 ft. NE of Solar's No. 1 Elder, and 450 ft. SE of Martin's No. 1 Elder, M. V. Winkle Sur. .....Derrick.

A. R. Hancock's No. 2 L. H. Brawley, 550 ft. E of No. 1 P. McAnnelly Sur. .....Derrick.

S. J. Jordan's No. 1 E. L. Walker, 660 ft. W of SE cor. of lease and 155 ft. from S line and 155 ft. from river. E. A. Lambert Sur. .....S.D. 3,592 ft.

Lester and Duffield's No. 2 I. Moore, 330 ft. from W line of lease and 660 ft. S of No. 1, F. W. Johnson Sur. .....Derrick.

Lewis et al's No. 1 R. M. Woods, 2,200 ft. N and 375 ft. E of SW cor. of survey, H. R. Hokit Sur. .....Drlg. 3,603 ft.

Madalyn Oil Co.'s No. 1 J. V. Rossen, 550 ft. N and S and 100 ft. E and W of tract, T. Johnson Sur. .....Rig up.

Magnolia Petroleum Co.'s No. 2 H. P. Hale, 330 ft. from W line of 50-ac. tract and 660 ft. S of No. 1, Tract No. 1, M. V. Winkle Sur. .....Moving in.

McBride et al's No. 1 Tubbs, 330 ft. from N line and center of E and W lines of 6-ac. lease, D. Sanches Sur. .....Derrick

C. C. McCormick's No. 1 S. Key, 1,000 ft. from S line of survey and 100 ft. from W line of survey, L. J. Rigsby Sur. .....Drlg. 3,500 ft.

Newman et al's No. 1 O. Prothro, 330 ft. from E line of lease and center of N and S line of 8.5-ac. tract, J. Blair Sur. .....Drlg. 2,680 ft.

J. B. Patty et al's No. 1 Farrell, 330 ft. S and 175 ft. W of NE cor. of E 50 acres of 148-ac. tract, D. Sanches Sur. .....Derrick.

Pennsylvania Oil & Gas Co.'s No. 2 T. B. Harris, 330 ft. from S line and 150 ft. from W line of 30-ac. lease, J. Ruddle Sur. .....S.D. 3,515 ft.

Philphroy Bros.' No. 1 Whittle, 80 ft. N of S cor. of Blk. No. 36, H. R. Hokit Sur. .....Spudded.

Producers Investment Co.'s No. 1 King, 20 ft. from N line and 125 ft. from W line of Blk. No. 117, M. V. Winkle Sur. .....Derrick

Raddatz' No. 4 Sabine River, Tract No. 8, 300 ft. W and 100 ft. S of SE cor. of Shell's Stitchcomb lease .....Rig up.

Rhodes Drilling Co.'s No. 3 Sabine River, Tract No. 4, 330 ft. from W line of lease and NE of Imperator's No. 1 Southworth .....Drlg. 3,350 ft.

Rhodes Drlg. Co.'s No. 4 Sabine River, Tract No. 4, 330 ft. N of The Texas Company's No. 6 Cole, State Lands Sur. .....Waiting on cmt. to set; T.D. 528 ft.

Rhodes Drlg. Co.'s No. 1 Sabine River, Tract No. 5, 366 ft. due east of Sun's No. 4 Cole, State Lands Sur. .....Drlg. 2,250 ft.

Rhodes Drlg. Co.'s No. 1 Sabine River, 330 ft. from E line and 378 ft. NW of Sinclair Prairie's No. 8-B A. A. King, Tract No. 1, State Lands Sur. .....Derrick.

Ruston Drlg. Co.'s No. 1 Sabine River, Tract No. 3, 330 ft. from E line of lease and 50 ft. N of S bank of river, State Lands Sur. .....Set surface csg.

Ruston Drilling Co.'s No. 2 Sabine River, Tract No. 3, 660 ft. W of No. 1 .....Derrick foundations.

Ruston Drilling Co.'s No. 3 Sabine River, Tract No. 3, 1,660 ft. W of E line .....Driving piling.

A. Snyder's No. 1 H. Adkins, 1,800 ft. from S line and center of a tract being N of S line of 5.37 acres of 9.37-acre tract, Lot No. 2, D. Dainwood Sur. ....Derrick.

South Gulf Production Co.'s No. 1 Cemetery, 225 ft. NW of Barnsdall's No. 1 McGrede, on one-half acre lease, D. Sanches Sur. .....S.D. 300 ft.

J. B. Sowell's No. 2 W. P. Luce, 378 ft. W of No. 1, R. L. Walker Sur. .....Skidded derrick.

W. C. Turnbow's No. 2 McKinley, 125 ft. N and 420 ft. E of NE cor. of Yount Lee's Harley lease, D. Sanches Sur. .....Derrick.

Universal Oil & Gas Co.'s No. 2 Adkins, 750 ft. S of No. 1, D. Dainwood Sur. .....Moving in.

C. Williams et al's No. 2 Brawley, 150 ft. N of No. 1, C. H. Alexander Sur. .....Rig up.

HENDERSON COUNTY

B. L. Green et al's No. 1 M. H. Gussett (old well drilled deeper), 150 ft. from N line and 1,000 ft. from W line of 105.5-ac. tract, 3 miles SW of Mabank, L. D. Stover Sur. .....Coring 3,201 ft.

Dr. J. T. Kennon et al's No. 1 Rowe & Baker, 1,320 ft. from N line and 150 ft. from W line of survey and tract, Josiah T. Childress Sur. .....S.D. 926 ft

H. H. Meyer's No. 1 M. E. Olson, 3 miles S of Brownsboro tract in NW cor. of survey, George Wilson Sur. .....S.D. 3,240 ft.

HILL COUNTY

T. J. Spikes' No. 1 M. H. Davis, 150 ft. from S and E lines of 55-ac. tract, H. R. Alexander Sur. .....S.D. 1,319 ft.

HOPKINS COUNTY

Burgess and Sinson's No. 1 First Natl. Bank, 470 ft. N and W of SE cor. D. Buie Sur., but located in the H.E.P.&P.R.R. Sur. .....Prepare to spud.

Columbia Oil & Gas Co.'s No. 1 McCloud, 150 ft. from S line and 200 ft. from E line of lease, Holbrook Sur., elev. 485 ft. .....Drlg. 1,265 ft.

Roark et al's No. 1 Taylor, 330 ft. from N and W lines of 30-ac. tract, in the John Polk Sur. .....S.D. 540 ft

HUNT COUNTY

A. Kelsey et al's No. 1 W. R. Berry, 450 ft. from S line and 300 ft. from E line of 139-ac. tract, J. Roads Sur. .....Location

KAUFMAN COUNTY

George Anderson's No. 1 W. N. Moody, 1,980 ft. S, 45 deg. E and 660 ft. S, 45 deg. W of NW cor. of survey, George Helder Sur. .....S.D. 3,555 ft.

P. L. Meader's No. 1 T. C. Coleman, 673 ft. from S line and 460 ft. from W line of 259-ac. tract, W. G. Gibbard Sur. .....Set surface csg.

LAMAR COUNTY

Doyle and Jondeau's No. 1 Martin, 990 ft. from N line and 330 ft. from E line of tract, Joseph Deck Sur. .....Rig up; T.D. 3,446 ft.

LEON COUNTY

Alladay et al's No. 1 W. R. Thompson, 330 ft. from N line of survey and 330 ft. from E line of 98-ac. tract, N. M. Allen Sur. ..... Drlg. 1,600 ft.
Shell-Penn & Black's No. 1 W. M. Phillips ..... Drlg. 5,302 ft.

MORRIS COUNTY

Grover Hart's No. 1 Walcott and Lott, 250 ft. from N line and 330 ft. from E line of survey, 3 miles S of Carson, B. A. Russell Sur. ..... Rig up.
Joiner & Harris Drilling Co.'s No. 1 Clayton Brown, 1,625 ft. N of most easterly SW cor. of survey, William M. Coffey Sur. ..... Derrick
Leonard's (Tucker-Fullwood) No. 1 P. M. Staggers, 450 ft. from N line and 150 ft. from E line of 45.5-ac. tract, J. D. Nelson Sur. ..... S.D. 3,672 ft.

POLK COUNTY

Cannon et al's No. 1 Roberts, 10 miles N of Livinston, Romera Sur. ..... Rig up and shut down

RED RIVER COUNTY

Concord Oil Co.'s No. 1 J. R. Dallahunty, 500 ft. from N of Isaac Moore Sur. and 200 ft. E of E line of Robert Glass Sur. ..... Drlg. 2,586 ft.

ROCKWALL COUNTY

Buccaneer Oil Co.'s No. 1 H. L. Lofland, center of 69-ac. tract in W. M. Bird Sur. ..... Set 10-in. csg. 130 ft

RUSK COUNTY

Barnsdall Oil Co.'s No. 1 Gill, 330 ft. from N and E lines of lease, R. W. Smith Sur. ..... Waiting on cmt. to set 3,531 ft.
Barnsdall Oil Co.'s No. 2 Gill, 302 ft. from N line and 330 ft. from W line of lease, R. W. Smith Sur. .... Derrick.
Big Indian Oil Co.'s No. 1 Joe Lee, 172 ft. from S line and 990 ft. from W line of 24-ac. lease, Peter Tipps Sur. ..... Derrick.
Boggs et al's No. 1 J. Border, 280 ft. S of Wyche's No. 1 Arnold on 5-ac. lease, P. W. Holmes Sur. ..... Drlg. 3,690 ft.
Brooks Petroleum Co.'s No. 1 Mayfield, Daniel Clark Sur. ..... Top sand 3,622 ft.; waiting on standard rig; would not flow T.D. 3,703 ft.
J. Ray Caskey's No. 1 J. R. Alford, center of .85-ac. strip, T. J. Moore Sur. ..... Drlg. 2,000 ft.
T. E. Castle's No. 1 R. H. Gary estate, 2,950 ft. from N line and 5,280 ft. from W line of survey, 10 miles S of Henderson, A. Latham Sur. ..... Fishing 3,812 ft.
Cupp et al's No. 1 M. Clay, S offset to Fair and Thompson's No. 1 Freeman Wiley, Juan Ximenes Sur. ..... Location.
J. Guinn's No. 1 Neal Cooper, center of Blk. No. 36, T. J. Moore Sur. ..... Waiting on standard rig 3,660 ft.
Gulf Production Co.'s No. 1 Hosen Baton, 1,210 ft. W and 330 ft. S of NE cor. of lease, Mary Cogswell Sur. ..... Spudding.
Gulf Production Co.'s No. 1 Wittle Oten, 330 ft. from S and W lines of 50-ac. lease, M. McCabe Sur. ..... Moving in.
Fred Hanbury's No. 2 M. L. Thompson, 266 ft. from N and E lines of 10-ac. lease, M. J. Pru Sur. ..... T.D. 3,570 ft.
Harris and Russell's No. 1 T. W. Harris, 330 ft. from S line and 660 ft. from W line of most southerly SW cor. of 160-ac. tract, 3 miles SW of Henderson, W. G. Davis Sur. ..... Derrick
Hasting and Dodson's No. 1 E. B. S. Florey, 257 ft. from S line and 287 ft. from E line of 25-ac. lease, P. W. Holmes Sur. ..... Waiting on cmt. to set 3,545 ft.
Hathaway et al's No. 1 Gray, J. M. McLain Sur. ..... S.D. 400 ft.
Helden-Rodgerson et al's No. 1 Barton and Birdwell, N offset to Reisinger et al's No. 1 Barton, W. G. Tutt Sur. ..... T.D. 3,792 ft
Humble Oil & Refining Co.'s No. 1 Amanda Simmons, 330 ft. from most northerly N line and 323 ft. from W line of 32.5-ac. lease, W. H. Bears Sur. ..... Washing in 3,816 ft.
J. Jeagens' No. 1 Needham, 330 ft. from N line of lease and 330 ft. from NE and 400 ft. from SE of survey, J. H. Chambers Sur. ..... Reaming out 1,414 ft
Luling Oil & Gas Co.'s No. 1 Barton, 135 ft. from N and S lines and 171 ft. from E and W lines of E 3½-ac. tract, M. McCabe Sur. ..... Location.
C. H. Lyons' No. 1 W. Moore, 330 ft. from N and W lines of lease, M. V. Pena Sur. ..... Rig up.
Joy McCartney's No. 1 Deason, 150 ft. from S and W lines of lease, Juan Ximenes Sur. ..... Drlg. 3,533 ft.
McMahon and McCulloch's No. 1 Joe Lee, 2,323 ft. from E line and midway between N and S lines of lease, Peter Tipps Sur. ..... Location.
Paulett et al's No. 1 Ed Sparks, 350 ft. from E, 150 ft. from S of survey, L. C. Riggs Sur. ..... S.D. 1,465 ft.
Selby Oil & Gas Co. and Lewis Petroleum Co.'s No. 2 W. D. Peterson, 277 ft. S and 378 ft. W of NE cor. of Gulf's Eaton lease, Mary Cogswell Sur. ..... Derrick.
Roger Bros.' No. 1 M. A. Thrash, 103 ft. from N and S lines, 233 ft. from W line and 267 ft. from E line of 4-ac. lease, F. Cordova Sur. ..... Bldg. derrick.
Ross Seward's No. 1 Burton, J. J. Y'Barbo Sur. ..... T.D. 3,387 ft
Fred Shields and Florence Oil Co.'s No. 1 R. L. Buckner, 330 ft. from N and W lines of 320-ac. tract and survey, John E. Davis Sur. ..... Set surface csg.
Smith and Skeer No. 1 Frederick, 150 ft. S of SE cor. of E. D. Oil Co.'s Alford lease, I. G. Parker Sur. .... S.D. 3,518 ft.
Stewart and Duffy's No. 1 Solar Jackson, 330 ft. from N and E lines of lease, P. W. Holmes Sur. ..... Derrick.
Trapshooter Reilly's No. 2 M. L. Thompson, 330 ft. from E line and center of N and S lines of 10-ac. lease, M. J. Pru Sur. ..... Rig up.
M. M. Travis' No. 1 J. Horton, 330 ft. from S and W lines of lease, J. S. Barnett Sur. ..... Derrick.
William Travis' No. 1 J. F. Horton, 330 ft. S and E of NW cor. of lease, J. C. Barnett Sur. ..... Derrick.
R. H. Vise's No. 2 W. D. Alford, 330 ft. from S line and 990 ft. from E line of 164-ac. tract, H. B. Dance Sur. ..... Fishing; T.D. 3,820 ft.
Karl Witt et al's No. 1 H. B. Leverett, 140 ft. from S line and 110 ft. from W line of 2.5-ac lease, J. Lindley Sur. ..... Drlg. 3,410 ft.

SMITH COUNTY

Boucher-Owen and McCulloch's No. 1 Beulah Means, 2,775 ft. from S line and 330 ft. from E line of lease, E. Daniels Sur. ..... Old well being drilled deeper; T. D. 450 ft.
Cockburn and Hooker's No. 2 Lula Jackson, 330 ft. from S and E lines of 76-ac. lease, E. Daniels Sur. .. Rig up and S.D
Golden Eagle Oil Co.'s No. 1 T. B. Collier, 137 ft. from S line and 180 ft. from E line of lease, J. Jordan Sur. ..... Derrick
Golden Eagle Oil Co.'s No. 1 E. E. Moore, 330 ft. from N and E lines of 8-ac. lease, Juan Vargus Sur. .... Derrick.
Golden Eagle Oil Co.'s No. 1 L. S. Sartain, center of 5-ac. lease, J. Jordan Sur. ..... Plugged back; waiting on cmt. to set; T.D. 3,839 ft.
Hooper et al's No. 1 Lule Jackson, 330 ft. S and 530 ft. E of most northerly SW cor. of Monroe Shell Robinson lease, E. Daniels Sur. ..... S.D. 3,815 ft.
Humble Oil & Refining Co.'s No. 7 M. C. Thompson, 330 ft. from N and W lines of lease, I. Moore Sur. ..... Washing in; T.D. 3,636 ft.
Joiner et al's No. 1 C. S. Jackson ..... T.D. 4,045 ft.; S.D.; prepare to abnd.
K. O. T. Oil Co.'s No. 2 S. S. Cooke, 330 ft. from N line and center of E and W lines of lease, J. Jordan Sur. ..... Drlg. 300 ft.
Lopez McCutchin's No. 1 Jessie Cole, 103 ft. from S line and 110 ft. from E line of 1.27-ac. lease, J. Jordan Sur. ..... Derrick.

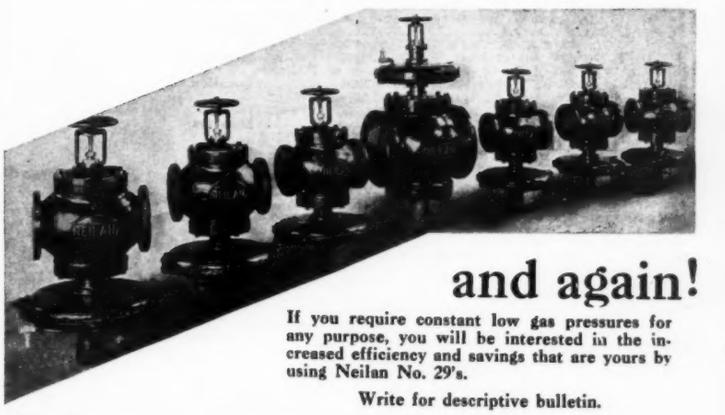
Again . . .

Gas engineers, ever-alert for improved regulation, are specifying Neilan No. 29 Sensitive Gas Regulators in constantly increasing numbers.

The group of six and twelve-inch Neilan Sensitive Reducing Regulators shown here were installed recently in the San Diego area. This and similar installations have demonstrated over and over again the superiority of the No. 29 on low-pressure gas regulation.

again . . .

The Neilan No. 29 is a distinctive type of pilot operated regulator developed expressly for gas service. Its main actuating diaphragm is pressure balanced and full floating. Naturally this eliminates pilot lag and makes the 29 instantaneously sensitive. Then too, each No. 29 is equipped with the Neilan Parabolic Gradual Opening Valve which enables it to handle very small volumes or full capacity with equal ease. Furthermore, the speed of this Neilan Regulator permits it to be used without a reservoir.



and again!

If you require constant low gas pressures for any purpose, you will be interested in the increased efficiency and savings that are yours by using Neilan No. 29's.

Write for descriptive bulletin.

NEILAN CO., Ltd.

(DIVISION OF MASON REGULATOR CO.)

641-651 Santa Fe Avenue — NEILAN — Los Angeles Calif., U.S.A.

NEW YORK, 19 Rector St. . . . . Rudolph B. Werey, Mgr.
CHICAGO, 1525 E. 53rd. St. . . . . Arthur J. Foley, Mgr.
PITTSBURGH, Clark Bldg. . . . . Bruce Irwin, Mgr.
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TOLEDO, OHIO, 3728 Woodmont Road . . . . . Frank Mason, Mgr.
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ST. LOUIS, 2726 Locust Blvd. . . . . O'Brien Equipment Co.
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SYRACUSE, N. Y., 640 Gurney Bldg., . . . O'Brien Steam Specialty Co.

"YOU CAN BE SURE OF NEILAN PRODUCTS"

F-5481

McRabie et al's No. 1 C. P. Hamilton, 330 ft. from N and E lines of 355-ac. tract, Jackson Rector Sur. ....Rig up and S.D.
Mundt et al's No. 1 W. E. Murray, 330 ft. from S and E lines of lease, 6 miles SE of Tyler, Marshall Wynn Sur. ....Fishing for drill stem; T.D. 4,620 ft.
Pugh and Hickman's No. 4 S. S. Cooke, 330 ft. from S line and 150 ft. from W line of lease, James Jordan Sur. ....Drlg. 3,691 ft.
Rabe et al's No. 1 Bateman, 332 ft. from S line and 275 ft. from E line of 15-ac. lease, James Jeedan Sur. ....Set csg.; T.D. 4,794 ft
Sun Oil Co.'s No. 1 Mattie Burns, 330 ft. from S and E lines of lease, Juan Vargus Sur. ....Drlg. 2,827 ft.
Sun Oil Co.'s No. 12 O. W. Knight, 1,640 ft. from S line and 2,000 ft. from E line of lease, D. Collins Sur. ....Derrick.
The Texas Company's No. 6-B Jarvis, 2,310 ft. S and 330 ft. E of NW cor. of lease, M. D. L. S. Coy Sur. ....Location.
Ed Wallace et al's No. 1 Jessie Cole, 150 ft. from S line of lease and due W offset to Smith's No. 1 Cole on 10-ac. lease, J. Jordan Sur. ....Rig up.
Weaver et al's No. 2 T. O. Wright, 150 ft. from W line and center of N and S lines of 12-ac. lease, Juan Vargus Sur. ....Connecting up; T.D. 3,738 ft.
C. K. West's No. 2 Sartain, 330 ft. from S and W line of lease, J. Jordan Sur. ....Waiting on cmt. to set; T.D. 3,810 ft.

TITUS COUNTY

Perry V. Cook's No. 1 M. C. Rogers, center of SW of Moore Sur. ....T.D. 4,313 ft

UPSHUR COUNTY

J. P. Evans et al's No. 1 Bell, 700 ft. from N line and 900 ft. from E line of 60-ac. lease, William Fadden Sur. ....Waiting on cmt. to set 138 ft.
Everette Oil Co.'s No. 4 A. J. Sanders, 330 ft. from S and W lines of lease, T. Allen Sur. ....Derrick.
Lewis Godlin's No. 2 J. T. Mackey, 660 ft. SW of No. 1 and 330 ft. NW of highway ....Rig up.
Pat Hudson et al's No. 1 D. F. Smith, 330 ft. out of SE cor. of W 100 acres of the N 200 acres of the 273-ac. lease, 3 miles E and 1¼ miles N of Cranfill & Reynolds' No. 1 Rash, John Denson Sur. ....Waiting orders 3,710 ft
J. E. Mabee et al's No. 3 Whitehurst, 330 ft. from N and W line of lease, McKinley and Williams Sur.....Drlg. 2,640 ft.
Ransom and Sheppard's No. 1 Stiles, 330 ft. from S line and center of E and W lines of 3¼-ac. lease, William King Sur. ....Tested salt water at 3,754 ft.; plugged back 25 ft.; waiting on cmt. to set.
W. L. Stevens et al's No. 1 J. Hargroves, 330 ft. from S line and center of E and W lines of lease, M. Mann Sur. ....Rig up.
The Texas Company's No. 2 Williams, 330 ft. from S and E lines of survey, J. Crouch Sur. ....Derrick.
Turnbow's No. 1 D. C. Shelton, center of 2¼-ac. tract, Wm. King Sur. ....Derrick
Twin Oil Co.'s No. 3 C. J. Mackey, 330 ft. from S line of lease and 660 ft. W of No. 1, J. M. Pineda Sur. ....Rig up.
R. H. Vice et al's No. 1 L. Graves, 330 ft. from S and W lines of 106-ac. lease, M. Irwin Sur. ....Location.
Wadley and Evans' No. 1 W. S. Jones, 330 ft. from S and E lines of 100-ac. lease, James M. Dunn Sur. ... S.D. 3,690 ft.
Watson's (formerly Kinsey) No. 1 D. F. Smith, 466 ft. from S line and 1,165 ft. from E line of 266-ac. tract, J. R. Davis Sur. ....S.D. 1,858 ft

VAN ZANDT COUNTY

Barton et al's No. 1 C. L. Hubbard, 600 ft. out of NE cor. of Hubbard 325-ac. tract, 3½ miles S of Canton, M. J. McCadena Sur. ....S.D. 2,405 ft
Kelly O. & G. Co.'s No. 1 Lemsford, center of Lemsford tract, John Conner Sur. ....S.D. 2,300 ft
Lyman et al's No. 1 J. C. Stewart, 150 ft. from N line and 650 ft. from W line of 90-ac. tract, A. McPhail Sur. ....Derrick.
Pure Oil Co.'s No. 1 A. D. Clark, 225 ft. S of N line and 218 ft. E of W line of lease, A. H. Wiley Sur. ....Testing 2,922 ft
Pure Oil Co.'s No. 3 R. L. Wells, 250 ft. S of N line and 250 ft. E of W line, H. V. Moon Sur. ....Location.
Pure Oil Co.'s No. 4 A. R. Humphreys, 1,125 ft. W of E line and 225 ft. S of N line of lease, A. McPhail Sur. ....Location.
Pure Oil Co.'s No. 4 H. P. Tunnell, 225 ft. W of E line and 150 ft. N of S line of lease, James Rose Sur. ....Location.
Pure Oil Co.'s No. 10 A. E. Tunnell, 250 ft. S of N line and 250 ft. W of E line of lease, John Walling Sur. ....Location.
A. C. Rowan's No. 1 W. E. Price, 150 ft. from N line and 150 ft. from W line of 28-ac. tract, John Walling Sur. ....Coring 2,942 ft.
Ray Stumpff's No. 1 M. L. Riggs, 160 ft. from E line and 250 ft. from S line of tract No. 2 and 330 ft. from E line of lease, 4 miles NE of Van, William Daniel Sur. ....Rig up and S.D
The Texas Company's No. 3 R. A. Tunnell, 225 ft. N and 200 ft. E of SW cor. of lease, John Walling Sur. ....Location.
Van Oil Association's No. 1 Tankersley, 200 ft. from E and 1,000 ft. from S of farm, L. Landers Sur. ....T.D. 2,850 ft
C. O. Weir's No. 1 W. B. Tunnell, 150 ft. from N and W lines of lease, A. H. Wiley Sur. ....Location

WOOD COUNTY

De Canther's No. 1 N. L. McLain, 350 ft. from N line and 642 ft. from E line of tract, Sam Brooks Sur....Coring 3,835-46 ft.; S.D.
F. B. Parriott's No. 1 John G. Harvey, 200 ft. from N line and 2,801 ft. from W line of survey, 6 miles E of Quitman, Meredith H. Usery Sur. ....Bldg. derrick.
W. B. Saulsbury's No. 1 T. H. Peters, 600 ft. from S line and 300 ft. from E line of 320-ac. tract and survey, 4 miles E of Mineola, W. B. McNutt Sur.....S.D. 400 ft.
Talke Oil Co.'s No. 1 G. T. Ross, B. L. Smith Sur. ....Fishing 3,840 ft
Wood County Dev. Co.'s No. 1 Davis, approximately 150 ft. from S line of 160-ac. tract and 2½ miles S of Kantes in Sarah McDonald Sur. ....S.D. 3,000 ft.

Wildcat Operations in West Texas

(Continued from Page 37)

S. C. Mann's No. 1 Moore, C NE, Sec. 11, Blk. 35, Twp. 1s, T.&P. Sur. ....Drlg. by bit 3,045 ft.
Phillips Pet. Co.'s No. 1 Baker, 150 ft. from N and 1,520 ft. from E, Sec. 21, Blk. 33, Twp. 2s, T.&P. Sur. ....Drlg. 1,565 ft.
Tribal Oil Co.'s No. 1-B Edwards, 130 ft. from S and 1,145 ft. from E, Sec. 16, Blk. 33, Twp. 2s, T.&P. Sur...Rigging standard tools

HOWARD COUNTY

American-Maracaibo's No. 5-A Settles, 1,896 ft. from N, 1,884 ft. from W, Sec. 4, Blk. 32, T.&P. Sur. ....S.D. 185 ft.
Green O. & R. Co.'s No. 1 Denman, 990 ft. from S and 2,310 ft. from W, Sec. 14, Blk. 30, Twp. 1s, T.&P. Sur..Spudded and S.D
Myers et al's No. 1 Denman, 2,305 ft. from S and 2,320 ft. from E Sec. 14, Blk. 30, Twp. 1s, T.&P. Sur. ....S.D. 1,030 ft.; cleaning out.
Mid-Continent Oil & Gas Co.'s No. 1 Denman, 990 ft. from S and 330 ft. from E Sec. 10, Blk. 30, Twp. 1s, T.&P. Sur. ....Spudded.
Sinclair-Prairie Oil Co.'s No. 3 Dodge, 1,650 ft. from S and 429 ft. from W, Sec. 11, Blk. 30, Twp. 1s, T.&P...Drlg. 2,558 ft.

HUDSPETH COUNTY

Patillo-Welsh's No. 1 Briggs ....Drlg. 800 ft.

IRION COUNTY

Stanolind Oil & Gas Co.'s No. 1 Williams, 1,320 ft. from S and E of Sec. 1,196, T.T.R.R. Sur. ....S.D. 6,617 ft
Straughn et al's No. 1 Kaiser, 1,320 ft. from N and 1,320 ft. from W, Sec. 69, H. Cooper Sur. ....S.D. 225 ft.

JONES COUNTY

Abers et al's No. 1 Burton, 150 ft. from S and 175 ft. from E of 42.4-acre tract in G. Martinez Sur. ....S.D. 1,005 ft.; temp. aband
Johnson's No. 1 Huddleston, 165 ft. from S and W of N half of N half of Sec. 39, Blk. 18, T.&P. Sur. ....S.D. 1,100 ft
Pope & Anderson's No. 2 Swann, 3,050 ft. from S and 1,120 ft. from E of I. Miley Sur. ....Drlg. 762 ft.
Smart & Reynolds' No. 1 Reynolds, 2,500 ft. from N and 150 ft. from W, Sec. 2, W. T. Scott Sur. No. 3...Drlg. 285 ft.
C. S. Spelling et al's No. 1 Lillie, 200 ft. from N and W Sec. 4, E. Miller Sur. No. 2 ....S.D. 2,030 ft
Southern Oil Co.'s No. 1 Swann, 1,000 ft. from E and 900 ft. from S of I. Miley Sur. ....Rig.
Young et al's No. 1 Harrell, 150 ft. from S and E of N half of Sec. 3, O.A.L. Sur. ....Location

LOVING COUNTY

Adams et al's No. 1 Reagan-McElvain, 2,310 ft. from NW and 1,650 ft. from NE Sec. 84, Blk. 1, W.&N.W. Sur. ....Spudded.
Columbia Oil & Gas Co.'s No. 2 Wheat, 2,310 ft. from NW and 330 ft. from SW Sec. 85, Blk. 1, W.&N.W. Sur. ....Drlg. 1,230 ft.
Eppenauer Drlg. Co.'s No. 1 Victor, 2,310 ft. from NE and 330 ft. from SE Sec. 4, Blk. 2, W.&N.W. Sur. ....Drlg. 3,336 ft.
Goldman et al's No. 1 Allen, 330 ft. from NE and NW of Sec. 90, Blk. 1, W.&N.W. Sur. ....S.D. 2,398 ft
Goldman et al's No. 2 Allen, 330 ft. from NW, 2,310 ft. from SW, Sec. 90, Blk. 1, W.&N.W. Sur. ....Shut down.
Goldman et al's No. 1 Reagan-McElvain, 330 ft. from NE, 2,310 ft. from NW, Sec. 84, Blk. 1, W.&N.W. Sur..Shut down.
Lewis & Siegel's No. 1 Johnson, 330 ft. from N and 1,650 ft. from W, Sec. 6, Blk. 56, Twp. 1, T.&P. Sur...S.D. 2,330 ft
Martin et al's No. 1 Wheat, 990 ft. from SW and SE, Sec. 83, Blk. 1, W.&N.W. Sur. ....Drlg. 380 ft.
Miller et al's No. 1 Ferguson, 990 ft. from NE of Sec. 44, Blk. 29 ....Spudded and S.D
Thomas' No. 1 Wheat, 2,310 ft. from NW, 990 ft. from NE, Sec. 82, Blk. 1, W.&N.W. Sur. ....S.D. 3,910 ft.
Trinity Drlg. Co.'s No. 1 Wheat, 2,310 ft. from SW, 330 ft. from SE, Sec. 2, Blk. 2, W.&N.W. Sur. ....S.D. 1,300 ft

MENARD COUNTY

Priest's No. 1 Sorrel, 1,000 ft. from E and 300 ft. from S cor., Sec. 152, E.L.&R.R. Sur. ....S.D. 2,300 ft

PECOS COUNTY

Adams et al's No. 1 Shearer, 1,650 ft. from SE and 330 ft. from NE Sec. 101, Blk. 14, H.&G.N. Sur. ....T.D. 1,471 ft., 25 bbls per hr. connecting to tanks
Aero Oil & Gas Co.'s No. 3 Byrne, 2,430 ft. from NW and 1,485 ft. from SW, Sec. 54, Blk. 10, H.&G.N. Sur...S.D. 60 ft.
Corvette Oil Corp.'s No. 8 H. Monroe, 1,040 ft. from E line and 150 ft. from N line of Sec. 39, G.C.&S.F. Sur., Blk. 194 ....Location
Davis et al's No. 1 University, 1,650 ft. from S and 330 ft. from E, Sec. 31, Blk. 16 ....Shut down
Kane Prod. Co.'s No. 1 Pecos Valley, 330 ft. from NW and 1,650 ft. from SW, Sec. 34, Blk. 3, H.&T.C. Sur...Cellar.
Messinger et al's No. 1 Jones, 1,300 ft. from NW, 1,290 ft. from SW, Sec. 5, Blk. 9, H.&G.N. Sur. ....S.D. 250 ft

PRESIDIO COUNTY

Sadler et al's No. 1 Bledsoe, 2,640 ft. from N and W Sec. 15, Blk. 354, G.C.&S.F. Sur. ....S.D. 328 ft

REAGAN COUNTY

Big Lake Oil Co.'s No. 7-C University, 1,570 ft. from W and 725 ft. from S, Sec. 35, Blk. 9 ....T.D. 8,825 ft.; flow increasing
Big Lake Oil Co.'s No. 8-C University, 710 ft. from S and 2,410 ft. from E, Sec. 12, Blk. 2 ....Drlg. 2,925 ft.
Big Lake Oil Co.'s No. 9-C University, 2,410 ft. from N and 765 ft. from E, Sec. 12, Blk. 2 ....Drlg. 715 ft.
Big Lake Oil Co.'s No. 181 University, 1,700 ft. from S and 2,000 ft. from W, Sec. 10, Blk. 2 ....Drlg. 705 ft.
Continental Oil Co.'s No. 6-B University, 765 ft. from N and 1,980 ft. from W, Sec. 36, Blk. 9 ....Drlg. 3,220 ft.
Group Oil Corp.'s No. 5-B University, 2,700 ft. from S and 1,775 ft. from W, Sec. 36, Blk. 9 ....Drlg. 7,978 ft.

REEVES COUNTY

F. McDorman et al's No. 1 Ray Roberts et al, 2,310 ft. from S and E lines of Sec. 22, Blk. 59, P.S.L. Sur. ...S.D. 2,025 ft
Southern Star Oil Co.'s No. 1 Wright, 1,330 ft. from S and W, Sec. 58, Cassel's Sur. ....S.D. 250 ft

RUNNELS COUNTY

Sinc Bonnett Oil Co.'s No. 1 McMillan [illegible] ft. from N and 660 ft. from W, Sec. 23, H. Travis Sur. ....T.D. 3,533 ft.; T.P. 3,520 ft., flowing 30 bbls. daily.
Dutton et al's No. 1 Dean, 5,475 ft. from NE and 1,048 ft. from NW in J. Hall Sur. No. 519 ....S.O. 3,417-20 ft; S.D. 3,500 ft

SCHLEICHER COUNTY

Eastland Oil Co.'s No. 1 Joe Tisdale, C Sec. 29, Blk. M, G.H.&S.A. Sur. ....T.D. 5,410 ft
Wesner et al's No. 1 Nicks, 2,310 ft. from N and 2,302 ft. from E of Sec. 77, Blk. LL, T.C. Sur. ....S.D. 5,580 ft
George Wilson's No. 1 Page, Sec. 40, Blk. L, 1,290 ft. from N, 1,570 ft. from W, G.H.&S.A. Sur. ....S.D. 5,052 ft

SCURRY COUNTY

G. E. Dickman et al's No. 1 F. C. Davis, 1,000 ft. N and 1,770 ft. W of SE cor. of Sec. 275, Blk. 2, E.&T.C. Sur. ....S.D. 5,100 ft
Heinzleman et al's No. 1 Hood, 436 ft. from N and 459 ft. from E, Sec. 87, Blk. 3, H.&T.C. Sur. ....S.D. 38 ft.
Scurry County Oil Exchange's No. 1 Earnest, 2,310 ft. from N and W, Sec. 68, Blk. 2, H.&G.N. Sur. ....Spudded and S.D
Seifert & Dibble's No. 1 T. M. Blackburn, 2,310 ft. from N and 2,310 ft. from W line of Sec. 153, Blk. 97, H.&T.C. Sur. ....S.D. 4,992 ft

TERRELL COUNTY

Big Bend Oil Co.'s No. 1 Bassett, C NW Sec. 155, Blk. D, M.-K.-T. Sur. ....S.D. 2,269 ft.
Keck Pecos Trust Co.'s No. 1 Hamilton, C Sec. 6, Georgetown Ry. Sur. ....S.D. 3,150 ft.; moved off tools
McPhee-Briggs' No. 1 Kerr, 330 ft. from S and W Sec. 15, Blk. D-5, M.-K.-T. Sur. ....Drlg. 525 ft.
Miller Bros.' No. 1 Allison & Burke, C NW Sec. 10, Blk. 176, T.&P. Sur. ....S.D. 130 ft
Mid-Kansas Oil & Gas Co.'s No. 1 Goode, 2,152 ft. from E and 330 ft. from S, Sec. 26, Blk. 161, G.C.&S.F. Sur..S.D. 6,130 ft
Jones et al's No. 1 Pankenham, C SE NW Sec. 43, Blk. B-2, C.C.S.D.&R.G.N.G. Sur. ....S.D. 2,548 ft.
Gides et al's No. 1 Phelps, 2,157 ft. from N and 2,482 ft. from W, Sec. 5, G. W. Hurley Sur. ....S.D. 3,525 ft.

TOM GREEN COUNTY

Belding & Dutton's No. 1 Norsworthy, 1,640 ft. from S and 587 ft. from E of John McNeese Sur. ....S.D. 760 ft.; S.O. and gas 728 ft
Minter Oil Co.'s No. 1 Campbell Est., 446 ft. from S and 430 ft. from W of Sec. 180, Dist. No. 11, S.P. Sur... SD. 1,994 ft
Pratt & Hancock's No. 2 Lewis, 100 ft. N and 330 ft. E of most northerly SW cor. of Joshua S. Grant Sur. No. 2 ....S.D. 300 ft

UPTON COUNTY

Clark-Cooper's No. 1 Lane, 2,310 ft. from N and 990 ft. from E Sec. 36, Blk. 1, M.-K.-T. Sur. ....Drlg. 2,190 ft.; show oil 2,172 ft

SPANG, CHALFANT & CO., INC.

General Offices: CLARK BUILDING, PITTSBURGH, PA.

Sales Offices: New York, Boston, Pittsburgh, Chicago, St. Louis, Tulsa, Los Angeles, Dallas, San Francisco

Welded Mills: Etna, Penna., Sharpsburg, Penna. *Seamless Mills:* Ambridge, Penna.

Hope Pet. Co.'s No. 2 Lane, 2,310 ft. from N, Sec. 36. Blk. 1, M.K.&T. Sur. ..... T.D. 2,315 ft.; to test
White's No. 1 Lane, 2,310 ft. from S and 990 ft. from E Sec. 36, Blk. 1, M.-K.-T. Sur. ..... 2,150 ft.

VAL VERDE COUNTY

Ousch et al's No. 1 J. P. Yoas, 1,300 ft. from the N line and E line of Sec. 31, Blk. 1 ,I.&G.N. Sur. ... S.D. 400 ft.
O. O. Owens' No. 1 Mills, Sec. 138, Blk. 1, I.&G.N. Sur., elev 2,130 ft. ..... S.D. 6,780 ft

WARD COUNTY

Abell Bros.' No. 4 Smith, 990 ft. from SE and 285 ft. from NE of C of Sec. 4, Blk. 34, H.&T.C. Sur. ..... Drlg. 460 ft.
Abell Bros.' No. 1, Hayzlett, 1,650 ft. from NW and 1,320 ft. from SW, Sec. 13, Blk. 5, H.&T.C. Sur. ..... Machine.
Atlantic Oil Prod. Co.'s No. 2 Barrow, 1,650 ft. from NE and 330 ft. from NW Sec. 28, Blk. 5, H.&T.C. Sur... S.D. 2,526 ft
Atlantic Oil Prod. Co.'s No. 1 Blank-Camp, 1,320 ft. from NW and SW Sec. 14, Blk. 34, H.&T.C. Sur. .... Location.
Barnsdall Oil Co.'s No. 3 Henry, 330 ft. from NE and 1,650 ft. from SE, Sec. 28, Blk. 29 ..... Cellar.
Bundy et al's No. 1 Bennett, 2,310 ft. from NW and SW Sec. 16, Blk. 34, H.&T.C. Sur. ..... S.D. 160 ft
Caprito et al's No. 1 Beatty, 330 ft. from SW and 990 ft. from SE, Sec. 3, Blk. 34, H.&T.C. Sur. ..... Drlg. 2,520 ft.
Eastland Oil Co.'s No. 2 Weiss, 1,091 ft. from SW and 2,345 ft. from SE, Sec. 4, Blk. 34, H.&T.C. Sur. ..... T.D. 2,405 ft.; flowing 80 bbls. day.
Eastland Oil Co.'s No. 1-A Weiss, 2,364 ft. from SE, 333 ft. from SW, Sec. 4, Blk. 34, H.&T.C. Sur. ..... T.D. 2,381 ft.; to test.
Eastland Oil Co.'s No. 2 Green, 2,364 ft. from NW and 330 ft. from SW, Sec. 4, Blk. 34, H.&T.C. Sur./ ..... T.D. 2,398 ft.; cleaning out
Eastland Oil Co.'s No. 3 Weiss, 954 ft. from NW and 284 ft. from NE of Sec. 4, Blk. 34 ..... Location.
Eppenauer's No. 1 Purcell, 365 ft. from SW and 1,650 ft. from SE of Sec. 17, Blk. 14, H.&T.C. Sur. ..... T.D. 2,740 ft
G. V. Greer's No. 1 Carr, 150 ft. from NW and 510 ft. from SW. Sec. 12, Blk. 5, H.&T.C. Sur. ..... S.D. 2,223 ft
Gulf Prod. Co.'s No. 13 Hutchings, 2,347 ft. from N and 330 ft. from E, Sec. 5, Blk. F ..... Set 8¼-in. csg. 1,270 ft
Gulf Prod. Co.'s No. 23 O'Brien, 330 ft. from N and 990 ft. from E Sec. 19, Blk. F ..... Location.
Kregle et al's No. 1 Heasler, 3,963 ft. from SE, 330 ft. from NE, Sec. 46, Blk. 34, H.&T.C. Sur. ..... Drlg. 1,910 ft.
Landreth Prod. Co.'s No. 1 Barker, 320 ft. from NW, 437 ft. from NE, Sec. 27, Blk. B-29, P.S.L. Sur. .... S.D. 2,407 ft.; shot; cleaning out.
Leidecker et al's No. 2 Bennett, 2,310 ft. from NW and 1,650 ft. from NE, Sec. 16, Blk. 34 ..... Drlg. 2,272 ft.
Maxwell's No. 1 Brillhart, 2,310 ft. from NE and SE Sec. 13, Blk. 34, H.&T.C. Sur. ..... Pipe set 2,306 ft.
S. F. Owen's No. 1 Lea, 1,344 ft. from NW and 4,532 ft. from SW, Sec. 1, J. Howe Sur. ..... S.D. 2,280 ft.
Penn Oil Co.'s No. 1 York, 2,310 ft. from NW and SW Sec. 10, Blk. 34, H.&T.C. Sur. ..... Drlg. 2,400 ft.; show oil 2,375 ft.
Penn Oil Co.'s No. 1 Hardage-Wilson, 330 ft. from NE and SE Sec. 11, Blk. 34, H.&T.C. Sur. ..... Shut down.
Rector Oil Co.'s No. 1 Monroe, 660 ft. from NE and SE, Sec. 62, Blk. 33, H.&T.C. Sur. ..... Drlg. 1,530 ft. in new hole.
Ranaud-Prettyman's No. 1 University, 330 ft. from N and E Sec. 4, Blk. 16 ..... Plugged back from 2,763 ft. to 2,735 ft.; cleaning out
Rixford-Fuglarr's No. 1 London, 660 ft. NW, 330 ft. NE E cor. Sec. 10, Blk. 33, H.&T.C. Sur., but in Sec. 8 ..... S.D. 2,291 ft.
Stanolind Oil & Gas Co.'s No. 2 Weiss, 330 ft. from SW and 1,810 ft. from SE, Sec. 4, Blk. 34, H.&T.C. Sur. Fishing 2,339 ft.,
Stanolind Oil & Gas Co.'s No. 3 Weiss, 1,118 ft. from SW and 1,810 ft. from SE Sec. 4, Blk. 34, H.&T.C. Sur Pipe cmtd. 2,240 ft.
Stanolind Oil & Gas Co.'s No. 1 Grimes, 1,485 ft. from NE and 2,113 ft. from SE, Sec. 14, Blk. 34 ..... Derrick.
Sturm et al's No. 2 Jones, 330 ft. from SW and 990 ft. from SE, Sec. 25, Blk. B-29, P.S.L. Sur. ..... Rigging up.
T. P. Coal & Oil Co.'s No. 5 James, 330 ft. from NE and 1,810 ft. from SE Sec. 5, Blk. 34, H.&T.C. Sur ... Drlg. 1,075 ft.
Thomas et al's No. 1 Bennett, 2,310 ft. from NE and SE. Sec. 16, Blk. 34 H.&T.C. Sur ..... Drlg. 2,565 ft.
Thompson's No. 1 Johnson, 2,310 ft. from SW and 330 ft. from NW, Sec. 9, Blk. 34, H.&T.C. Sur. ..... Drlg. 505 ft.
Weekly Oil Corp. and L. E. Hults' No. 1 Burks, 330 ft. from SE and 1,320 ft. from SW, Sec. 26, Blk. B-29, P.S.L. Sur. ..... To run csg at 2,207 ft

WINKLER COUNTY

Richardson et al's Scarborough, 990 ft. from N and W Sec. 1, Blk. 77 ..... Ready to spud.
Richardson et al's No. 1 Scarborough, 990 ft. from N and 1,650 ft. from W, Sec. 1, Blk. 77 ..... Cellar.
Richardson et al's No. 2 Sealy estate, 1,650 ft. from S and 330 ft. from W, Sec. 94, Blk. A, G.M.M.B.&A. Sur. ..... Drlg. 1,910 ft.
Richardson et al's No. 2 Scarborough, 1,980 ft. from S and 660 ft. from W. Sec. 1, Blk. 77, P.S.L. Sur. .... Ready to spud

Wildcat Operations in Texas Panhandle

Week Ending October 17

CARSON COUNTY

Company, well, farm name, section and block—	Remarks
Gulf Prod. Co.'s No. 6 Cooper, 330 ft. from N and W SW, Sec. 4, Blk. 9, I.&G.N. Sur.	Rig.
H. A. M. Oil Co.'s No. 3 Cooper, 990 ft. from S, 330 ft. from W of E half NE, Sec. 5, Blk. 9, I.&G.N. Sur...	Spudded.
Osborne's No. 1 Byrum, 330 ft. from N and E, N½ NW, Sec. 188, Blk. 3, I.&G.N. Sur.	Drlg. 3,230 ft.; T.P. 3,081 ft
Sinclair Prairie Oil Co.'s No. 1 Cooper, 330 ft. from S and W, Sec. 4, Blk. 9, I.&G.N. Sur.	Rigging up rotary.
Skelly Oil Co.'s No. 20 W. Schaffer, 1,320 ft. from S and E, Sec. 37, Blk. 4, I.&G.N. Sur.	Spudded.
Stubblefield-Shell's No. 3 Cooper, 330 ft. from N and 330 ft. from E of SE, Sec. 5, Blk. 9, I.&G.N. Sur....	Cellar.
Texoma Nat. Gas Co.'s No. 1-T Urbanczyk, center SE. Sec. 25, Blk. 4, I.&G.N. Sur.	Drlg. 730 ft.
Texoma Nat. Gas Co.'s No. 1-G Urbanczyk, 1,323 ft. S, 2,653 ft. E S half, Sec. 19, Blk. 4, I.&G.N. Sur.	Rig.
The Texas Co.'s No. 1 Byrum, 330 ft. from N and W, S half NW, Sec. 188, Blk. 3, I.&G.N. Sur.	Drlg. 2,520 ft.

CHILDRESS COUNTY

Robertson's No. 1 Biddy, center S 26⅓ acres of N, Laughlin Sur. Blk. T	Rig.

COLLINGSWORTH COUNTY

Cochran Bros.' No. 1 Atkinson, 660 ft. from N and E, Sec. 26, Blk. 21, H.&G.N. Sur.	Spudded.
Kates et al's No. 1 Hickman, center NE. Sec. 42, Blk. 19, H.&G.N. Sur.	Drlg. 1,600 ft.
Kates et al's No. 1 Bell, 300 ft. from N, 2,310 ft. from W. Sec. 21, Blk. 102, H.&G.N. Sur.	S.D. 1,340 ft.; elevation 1,910 ft.

COTTLE COUNTY

Darby Pet. Co. et al's No. 1 Purcell, 330 ft. from N, 1,320 ft. from E, Sec. 40, Blk. B, John H. Stevens Sur.	Drlg. 2,705 ft.

DEAF SMITH COUNTY

Western Union Oil Co.'s No. 1 Farwell, C NW, Sec. 12-2n-2e	S.D. 1,340 ft

GRAY COUNTY

Buck & Barber's No. 1 Buck, 660 ft. from S, 330 ft. from W, Sec. 140, Blk. 25, H.&G.N. Sur.	S.D. 2,423 ft
Baldridge et al's No. 1 Melton, 330 ft. from NE E half NE, Sec. 95, Blk. B-2, H.&G.N. Sur.	Drlg. 520 ft.
Baldridge et al's No. 1 Catlin, 330 ft. S and E of E 80 of 158-ac. tract, Sec. 57, Blk. 3, I.&G.N. Sur.	Location.
Boyce et al's No. 1 Colebank-Morse, 330 ft. NE, Sec. 65, Blk. 25, H.&G.N. Sur.	S.D. 2,554 ft.; shot 50 qts.; no results.
Christy's No. 1 Gothings, 330 ft. from N and E, Sec. 13, Blk. A-9, H.&G.N. Sur.	Machine.
Dixon Creek Oil Co.'s No. 1 Chapman, 330 ft. from S and W, Sec. 69, Blk. 25, H.&G.N. Sur.	Drlg. 2,425 ft.
Gerber O. & G. Co.'s No. 1 Stubbs, 330 ft. from S, 990 ft. from W, Sec. 9, Blk. 3, B.&B. Sur.	Cellar
Graham-Crue Hoover's No. 1 Barrett, 330 ft. from S and W, Sec. 130, Blk. 3, I.&G.N. Sur.	T.D. 2,240 ft.; standardizing
Jewel Oil Co.'s No. 1 Meers, 330 ft. from S and W, NW SW, Sec. 106, Blk. 3, I.&G.N. Sur.	S.D. 3,483 ft.
Kewanee O. & G. Co.'s No. 1-F Morse, 330 ft. from S and W, Sec. 3, Blk. 26	Show gas 2,350 ft.; S.D. 2,575 ft
Magnolia Pet. Co.'s No. 6 fee, 660 ft. from S and W. Sec. 14, Blk. 3 I.&G.N Sur	Drlg. 3,175 ft.
Magnolia Pet. Co.'s No. 7 fee, 660 ft. N and W SW, Sec. 14, Blk. 3, I.&G.N. Sur.	Rig.
Mid-Kansas O. & G. Co.'s No. 2 Webb, 990 ft. from N, 330 ft. from W NE, Sec. 61, Blk. 25, H.&G.N. Sur.	Bldg. derrick.
Nipper et al's No. 1 Morse, 330 ft. from S and E sec. 1, Blk. 26, I.&G.N. Sur.	S.D. 2,750 ft.
Naboh Oil Co.'s No. 1-E Morse, 330 ft. from S and W. W½ SE, Sec. 67, Blk 25, H.&G.N. Sur.	Plugged back to 2,635 ft
Parton & Holt's No. 2 Morse, 330 ft. from W, 250 ft. from N, W½ SW, Sec. 5, Blk. 26, H.&G.N. Sur.	S.D. 2,635 ft.
Parton Holt's No. 3 Morse, 660 ft. from N and E of E half SW, Sec. ¼, Blk. 26, H.&G.N. Sur.	Drlg. 2,238 ft.; 10,000,000 ft. gas from 2,205 ft.
Plains Drlg. Co.'s No. 1 Thut, 960 ft. from N, 330 ft. from W. Thut Sur.	Testing 2,375 ft.; 40 bbls. day
Pulse-Shell's No. 1 Brown, 330 ft. from N, 250 ft. from E of NW. Sec. 138, Blk. 3, I.&G.N. Sur.	Drlg. 2,085 ft.
Richardson No. 1 Wright, 330 ft. from S and W, Sec. 73 Blk. 3 I.&G.N. Sur	Set 8-in. csg. 2,750 ft.
Saunders et al's No. 2 Sullivan, 322 ft. from W, 231 ft. from NE, 160 ft. S, 264 ac. of N½, Sec. 136, Blk. 3, I.&G.N. Sur.	Will plug back to 2,375 ft. and shoot.
Skelly Oil Co.'s No. 3 South Jackson, 330 ft. from N, 990 ft. from E, Sec. 38, Blk. B-2	Drlg. 2,415 ft.
Skelly Oil Co.'s No. 6 Saunders 270 ft. from S, 330 ft. E SW, Sec. 4, Blk. 1, A.C.H.&B. Sur.	Drlg. 2,720 ft.; T.P. 2,657 ft
Skelly Oil Co.'s No. 7 Saunders, 330 ft. from N, 360 ft. from W, Sec. 4, Blk. 1, A.C.H.&B. Sur.	Drlg. 420 ft.
Tarber's No. 1 Saunders, 330 ft. N and W, Sec. 3, Blk. B.B.B.&S.F. Sur.	Location
Tedesco-Bell O. & G. Co.'s No. 3 Morse, 330 ft. from N and W N half SE, Sec. 1, Blk. 26, H.&G.N. Sur.	Bldg. rig.
The Texas Co.'s No. 5 Shaw, 330 ft. from S and E, E half Sec. 5, Blk. 1, A.C.H.&B. Sur.	Drlg. 1,330 ft.
The Texas Co.'s No. 1 Pope, 330 ft. from N and E of W half SE, Sec. 173, Blk. 3, I.&G.N. Sur.	Drlg. 3,015 ft.
The Texas Co.'s No. 12 Williams, 270 ft. from N, 330 ft. from E of N half NW, Sec. 7, Blk. 1, A.C.H.&B. Sur.	T.P. 2,685 ft.; drlg. 2,710 ft.; 90 bbls. hr.
The Texas Co.'s No. 22 Saunders, 300 ft. S, 330 ft. from W SE, Sec. 4, Blk. 1, A.C.H.&B. Sur.	Cellar.
The Texas Co.'s No. 13 Williams, 300 ft. N, 330 ft. W NE, Sec. 7, Blk. 1, A.C.H.&B. Sur.	Cellar.
Tripplehorn Bros.' No. 1 Lovett, 330 ft. from N and W, Sec. 57, Blk. B-2, H.&G.N. Sur.	Drlg. 3,120 ft.
Travis et al's No. 2-B Webb, 990 ft. from S, 330 ft. from E of NW, Sec. 61, Blk. 25, H.&G.N. Sur.	Fishing 2,360 ft.
Weltzel Oil Co.'s No. 2 Morse, 330 ft. from S and E of N half NW, Sec. 67, Blk. 25, A.&G.N. Sur.	Drlg. 2,175 ft.

HEMPHILL COUNTY

Hoover's No. 1 Hoover, 350 ft. from N, 1,300 ft. from E, G. S. Hood Sur.	S.D. 5,140 ft.

HUTCHINSON COUNTY

Baso's No. 1 Moore, 330 ft. from S, 330 ft. from E, in 80 ac. in NW, Sec. 21, Blk. M-21, T.C.R.R. Sur.	T.D. 3,080 ft.; estm. 5 or 10 bbls. may plug.
Canadian River Gas Co.'s No. 2-A Dunaway, 330 ft. from N and W, SE, Sec. 5, Blk. Y-3, T.T.R.R. Sur.	Drlg. 2,265 ft.
Danciger O. & R. Co.'s No. 1 Johnson, 330 ft. N and W, SE, Sec. 34, Blk. Y, A.&B. Sur.	Spudded and S.D
Deal O. & G. Co.'s No. 2 Sanford, 330 ft. N and E of N 80 ac., S 160 ac., Sec. 81, Blk. 46, H.&T.C. Sur.	S.D. 450 ft.
Holmes & Newblock's No. 2 Moore-Langdon, 330 ft. from N and W, Sec. 125, Blk. 4, I.&G.N. Sur.	S.D. for repairs 2,947 ft
Huber Pet. Co.'s No. 2 Christian, 330 ft. from S and E, SW, Sec. 33, Blk. Y, A.&B. Sur.	Drlg. 1,925 ft.
Huber Pet. Co.'s No. 1 Moyer-Johnson, 990 ft. from N, 330 ft. from E half SW, Sec. 34, Blk. Y, A.&B. Sur.	S.D. 2,275 ft.; 12,000,000 ft. gas
Liner Drlg. Co.'s No. 1-D Johnson, 330 ft. from N and E Sec. 6, Blk. 1, B.&B. Sur.	Plugged back to 2,146 ft.; S.D
Joe Murphy's No. 1 Watkins, 440 ft. from N and W of N half, Sec. 13, Blk. M-21	Drlg. 1,370 ft.
Oates & Morrow's No. 2 Starnes, 1,400 ft. from S, 660 ft. from E, Sec. 24, Blk. M-23, T.C.R.R. Sur.	S.D. 3,000 ft.; ran 6-in. csg.
Pharis Oil Co.'s No. 5 Smith, 660 ft. from N and W, SW, Sec. 14, Blk. Y, M.&C. Sur.	Shut down.
Stansylvania Oil Co.'s No. 3 Stansbury, 330 ft. from S, 1,264 ft. from W. Sec. 129, Blk. Z, E.L.&R.R. Sur.	Drlg. 2,560 ft.
Timms-Deatch's No. 4 Moore, 330 ft. N and W, Sec. 124, Blk. 4, I.&G.N. Sur.	Drlg. 2,345 ft.

LIPSCOMB COUNTY

Okla. Public Service Co.'s No. 1 C. W. Jones, NE SW, Sec. 100, H.&T.C. Sur.	T.D. 5,069 ft

MOORE COUNTY

Canadian O. & G. Co.'s No. 2-A N. H. Reed, 200 ft. N of N line, Sec. 20, Blk. B-10, 200 ft. E of E line, Sec. 16, but in Sec. 47, Blk. 3, G.&M. Sur.	Location.
Dogie Oil Co.'s No. 1 Stevenson, 330 ft. from N and W, Sec. 277, Blk. 44, H.&T.C. Sur.	Rebuilding rig 1,150 ft.
Shamrock Oil & Gas Co.'s No. 2 Brumley, 330 ft. from N and W, Sec. 269, Blk. 44, H.&T.C. Sur.	Fishing 2,992 ft.
Shamrock Oil & Gas Co.'s No. 1 Burnett, 660 ft. from S, 330 ft. from W, Sec. 359, Blk. 44, H.&T.C. Sur.	Drlg. 660 ft. on new hole.

MOTLEY COUNTY

Matador Oil Corp.'s No. 1 Owens, C NE, Sec. 10, Blk. G, B.&B. Sur.	S.D. 530 ft

OLDHAM COUNTY

Amalgamated German-American Oil Corp.'s No. 1 Norton, 330 ft. S and E, Sec. 12, T.&N.O. Sur.	S.D. 400 ft
Chambers et al's No. 1 Herring, CNL, Sec. 20, Blk. 8, G.C.&S.F. Sur.	T.D. 4,000 ft.; moving in rotary

ROBERTS COUNTY

Chicken Creek Oil Co.'s No. 1 Ledrick, 330 ft. N and W, Sec. 55, Blk. C, G.&M. Sur.	Drlg. 4,725 ft.
Travis et al's No. 1 Cunningham, 330 ft. S and W, Sec. 74, Blk. M-2, H.&G.N. Sur.	S.D. 2,690 ft

WHEELER COUNTY

Delaney et al's No. 1 Sitter, 330 ft. from S and W of E half NE, Sec. 33, Blk. 24	Drlg. 375 ft.
Devore & Robinson's No. 1 Sitter, 2,310 ft. from S and E, E½, Sec. 33, Blk. 24, H.&G.N. Sur.	T.D. 2,760 ft.; S.D. for pipe line connection.
Piney Oil & Gas Co.'s No. 4 Thompson, 330 ft. from S and E of E half SW, Sec. 42, Blk. 24, H.&G.N. Sur.	Drlg. 3,315 ft.; 10,000,000 ft. gas from 2,314-2,396 ft.

Oklahoma's Allowable Production Reduced to 381,740 Bbls. Per Day By State Commission

By W. A. SPINNEY
Staff Correspondent, Oklahoma Fields

The discovery well in the community area in the Perry Field, Noble County, which is now taking a 10-day potential gauge, has been steadily declining and the operators are drilling it deeper. The discovery well, L. H. Wentz and others' No. 1 Wolff, C SE NW, Section 17-20-2w, declined to 1,072 bbls. on the gauge of October 16, after it had been drilled to a total depth of 5,203 feet. The old total depth of the well was 5,197 feet, and it is reported that after making new hole the bit is in the dolomite. The well is believed to be producing from Wilcox sand at 5,195-97 feet but there is some controversy as to whether it is first or second Wilcox. The drilling deeper has not helped the production as yet. The well was opened October 12 and made 1,717 bbls. of oil after being shut in for about 10 days. The next day's gauge was 1,318 bbls. It made 1,127 bbls. on October 14 and 1,106 bbls. on October 15. On account of the number of short-term leases in the territory surrounding the unitized block a suggestion has been made to include the acreage around this block in a new community agreement to include approximately 6,000 acres. The original unitized block comprised 2,160 acres.

A number of companies with acreage in the surrounding territory have declared that this would make too large a community block and suggest that one or more units be communitized in the area around the original block.

Companies with leases in the township are interested in restricting the drilling of new wells until there is a market demand for the crude oil. If the acreage was unitized it would prevent an excess of drilling wells.

State's New Allowable

Under the Corporation Commission's new proration order the largest restriction in the State's production is in the Greater Seminole area. Approximately 11,000 bbls. has been cut off of wells in that area. This order is effective for the months of October, November and December in all pools in the State, with the exception of the Oklahoma City Field, which will be changed every two weeks.

Production from Oklahoma was estimated at 372,250 bbls. daily for the week ending October 15. It is a decline of 8,700 bbls. daily from the previous week. The State's daily allowable was placed at 381,740 bbls. for the last half of October.

Sovereign Oil Co.'s No. 1 Flowers, SW cor. SE SE Section 14-12-3, a wildcat in Lincoln County, found a showing of oil stray sand at 4,602-16 feet, when it was cored. The well was drilling deeper at 4,800 feet.

Good Showing in Creek County

E. L. Jillson and others' No. 1 Starr, SE cor. NW Section 18-15-8, Creek County, found a showing of oil in the Wilcox sand at 3,855 feet. Oil rose 3,500 feet in the hole. The nearest production to the well is about three-quarters of a mile east. The casing was being landed before a production test was made of the oil showing. This well was drilled on a 400-acre unitized block and it is one of the first unitized wells drilled on restricted Indian land in Oklahoma. The companies interested include the Stanolind Oil & Gas Co., Amerada Petroleum Corp., Sinclair Prairie Oil Co., Mid-Continent Petroleum Corp., E. L. Jillson, T. K. Simmons, James L. Gizzard and Peerless Oil Producing Co.

The well was favorably located after a subsurface survey and it is also understood the area was covered with a seismograph and passed upon as favorable.

Drilling Deeper in Logan County

Development has been resumed in the Old Roxana Pool, in Logan County, on old wells which are to seek deeper producing horizons. The shutdown agreement in force in that area for several months was suspended when the county court ordered the Cosden Oil Co. to drill its No. 1 Gardner deeper to the School Land sand from the Wilcox sand. This activity is the result of the deepening of Shell Petroleum Corp.'s No. 6 McCully, in Section 30-19-4w. When drilled deeper it showed for about 1,000 bbls. daily.

Cosden Oil Co.'s No. 1 Gardner, NE cor. NW Section 31-19-4w, started deepening and L. H. Wentz' No. 2 Williams, NW cor. NE Section 31-19-4w, was rigging up to drill deeper. Work at these two locations was stopped and an agreement made to keep the wells shut down pending the court decision. Shell Petroleum Corp.'s No. 6 Sebranek, SW cor. NE Section 30-19-4w, was rigging up to drill deeper.

Production Cut to 381,740 Bbls.

The allowable production in Oklahoma was reduced approximately 14,725 bbls. for the period from October 16 to November 1. The total state allowable will be 381,740 bbls. daily, with the potential placed at 4,327,667 bbls. The Corporation Commission will meet October 28 to consider new nominations for the Oklahoma City Field. Any adjustments will be credited to that field. The following table gives the October allowable and allowed pipe line shipments:

Pools—	Potential (bbls.)	Allowed shipments (bbls.)
Allen	17,974	7,392
West Asher	9,249	3,792
Bowlegs	25,177	10,358
Carr City	20,192	8,279
Earlsboro	23,498	9,776
East Earlsboro	18,863	7,769
South Earlsboro	5,967	2,446
Earlsboro Townsite	3,306	1,403
Konawa	10,835	4,513
Little River	38,896	16,018
East Little River	3,009	1,245
Maud	1,839	1,073
Mission	14,894	6,118
Sasakwa	2,325	989
Searight	6,708	2,786
Seminole	23,038	9,492
East Seminole	2,370	983
West Seminole	13,427	5,505
St. Louis	34,009	14,132
Strippers	4,221	4,221
Total Class "B"	297,797	118,290
Chandler	5,601	3,000
Fish	34,740	2,500
Orlando	900	500
West Perry	2,425	800
Tatums	56,850	5,400
Wewoka Townsite	5,072	2,500
Total Class "C"	105,588	14,700
Class "A"	24,900	24,864
Others	150,136	150,136
Total	185,036	175,000
East Earlsboro (Calvin)	8,556	400
West Konawa	1,874	300
Bristow	2,989	300
Logan County	1,817	50
Total wildcats	15,235	1,050
Oklahoma City	3,742,010	72,700
State total	4,327,667	381,740

The reduction in the Greater Seminole area is approximately 11,000 bbls. daily, having been reduced from 44 per cent of potential to 41 per cent until December 31, 1932. This area shows the largest reduction of any in the State under the latest Corporation Commission's order. The Oklahoma City Field was reduced approximately 3,050 bbls. and the Chandler area was reduced 675 bbls. daily.

The commission found that the reasonable market demand for the oil from all producing areas of the State outside of the Oklahoma City Field, during the period from October 16 to December 31, 1932, will be 309,040 bbls. a day.

The commission held that several wells in the Oklahoma City Field appear to be incapable of producing the underproduction credited to them and they were given until October 28 to determine whether they will be able to produce the underproduction or whether such underproduction should be cancelled. The wells were as follows: Anderson-Prichard's No. 2 Gibbens, Champlin Refining Co.'s No. 2 Seal, Indian Territory Illuminating Oil Co.'s No. 1 L. Trosper, Slick-Urschel's No. 1 S. Carter, No. 4 Central and No. 3 Donnrenther and John H. Peacock's No. 1 Sheppard.

Wildcat Restrictions

The commission ordered the wildcat pools in the State to be limited to a daily average as set out, each as follows:

Pool—	Bbls.
Calvin	400
West Konawa	300
Bristow	300
Logan County	50

The amount allowed to each pool will be divided among the several leases in the pool as provided in the existing orders of the commission.

During the month of September the underproduction in the Oklahoma City Field was reduced approximately 569,086 bbls. to a total of 449,886 bbls. while the overproduction was increased 33,824 bbls. to a total of 1,011,069 bbls. according to the monthly report of the military authorities. These figures do not include all of the alleged illegally produced oil, amounts of which have not been proved or determined.

Four Big Overproducers

Four companies show an overproduction in excess of 100,000 bbls. The Blackwell Oil & Gas Co. had a total of 144,460 bbls., the majority of which is alleged to have been charged to No. 1 Sullivan as being illegally produced. Champlin Refining Co. has a total of 265,922 bbls. of overproduced oil, most of which was produced under the Federal court order more than a year ago and later charged to the wells. Kessler Oil & Gas Co. has 175,615 bbls. charged to No. 1 Grace, which was alleged to have been overproduced during its completion stages while owned by Hall & Briscoe. Phillips Petroleum Co. has 175,615 bbls. charged to wells which have not served their 65-day shut-down period.

Under the Oklahoma Corporation Commission's new proration order which was effective October 16, at 7 a.m., all the previous orders were continued in effect respecting methods of production.

The commission found that the conditions of threatened and imminent economic waste, underground waste, surface waste and waste incident to the production of crude oil or petroleum in excess of transportation of market facilities and reasonable market demands, found to exist in several pools and producing areas in the State, still continue and will so continue during the months of October, November and December, 1932, and for some time thereafter.

The commission's order covering the Oklahoma City Field only covers the period from October 16 to November 1, 1932. The order finds that the reasonable market demand is 72,700 bbls. daily. There are 759 wells in the field other than those producing from the Siliceous lime, eligible to production during the month of September, having a potential of 3,742,010 bbls. daily.

The production from the wells in the Siliceous lime area was limited to 800 bbls. per day without injury to the wells. The additional allowance of 100 bbls. daily, as at present provided, for each well other than those producing from the Siliceous lime area making 3 per cent or more water, cannot be reduced without serious consequences to all wells in the area, the commission held. During the period from October 16 to 31, there will be 117 such wells. There are now 11 wells drilling in the Oklahoma City Field which are expected to be completed during this same period and each will be entitled to be open for production of oil not exceeding eight hours, and the production of such wells for the same period is estimated to be a daily average of 3,787 bbls. The remaining market demand for the oil from the Oklahoma City Field, after deducting, the amount allocated from the wells producing from the Siliceous lime area; the 100 bbls. allocated to wells other than those in the Siliceous lime area which are making 3 per cent or more salt water, and the 25 bbls. allocated to each of the 759 wells producing from other than the Siliceous lime area, should be apportioned among the 759 wells.

Governor's Statement

During the week Governor Murray issued a statement that Wilcox Oil & Gas Co. was overproduced 1,941,288 bbls. of oil. He said the company's own reports show that it is overproduced that amount from November 1, 1931, to August 31, 1932. The report shows that the company produced 2,956,777 bbls., while the allowable for these leases was only 1,015,489 bbls.

The Wilcox Oil & Gas Co.'s wells are still shut in under the orders of the military. Some time ago the state supreme court granted the company the right to open and produce their wells under a supersedeas bond. But the military authorities have refused to let the company produce the wells.

The following table is a statement issued by Governor Murray, showing the production by months of the Wilcox Oil & Gas Co. from November 1, 1931, to August 31, 1932:

Date—	Prod. of leases	Allowable	Overprod.
November	382,651	150,583	232,068
December	356,257	166,637	189,620
January	317,312	106,421	210,891
February	251,583	45,869	205,714
March	609,329	43,752	565,577
April	294,873	102,517	192,356
May	34,467	122,225	*87,757
June	279,144	108,510	169,634
July	378,871	89,780	289,091
August	53,290	79,195	*25,904
Total	2,956,777	1,015,489	1,941,288

*Represents underproduction.

Southern Oklahoma

In the Tatums Pool in Carter County a new southwest well was completed during the week. P. Robb and others' No. 3 Burton, NW cor. SW NE, Section 31-1s-2w, swabbed 361 bbls. of oil in 12 hours from a sand series at 2,235-2,390 feet. The total depth of the well is 2,420 feet. It was shut in for additional tankage.

Forbes and others' No. 2 Trahern, SW

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cor. SE NW, Section 31-1s-2w, found the oil sand at 2,270-91 feet and cemented the casing at 2,270 feet.

Frank Lundy and others' No. 1 Majors, NE cor. SE NE, Section 25-1s-3w, was rigging up. It is located between the old field and the extension area.

North of the production in the field Page & McFarland's No. 1 Brooks, NE cor. SW SW, Section 13-1s-3w, was drilling at 2,315 feet.

In Stephens County one well was completed, George Pace and others' No. 2 Caldwell, NW cor. NE SW SE, Section 21-2s-7w, is estimated at 100 bbls. from sand at 1,714-21 feet. The north offset to this well is pumping around 135 bbls. daily. The same operators' No. 3 Caldwell, 300 feet south of No. 2 Caldwell, is a new location. The same operators' No. 5 Allen, NE cor., Section 3-2s-8w, missed production in the 1,907-11-foot sand horizon and was drilling deeper at 2,065 feet.

E. D. Gillette and others' No. 1 Cooley, NW cor. SE NW, Section 17-2s-8w, a wildcat was spudded 60 feet and shut down. It is scheduled to be a deep test.

Atoka County

Barton and others' No. 3 Miller, NW cor. SW SE SW Section 26-1s-14, is a machine. Same operators' No. 2 Miller, NE cor. NW SE SW Section 26-1s-14, was abandoned at 200 feet.

Carter County

Simpson and others' No. 1 Walker, SW cor. NW Section 10-4s-2w, made 60 bbls. from 1,903-98 feet. Robb and others' No. 3 Burton, NW cor. SW NE Section 31-1s-2w, made 361 bbls. in 12 hours from 2,228-2,370 feet.

Cotton County

Pure Oil Co.'s No. 3 Funk, NE cor. SE SW NE Section 32-1s-10w, made 750,000 feet of gas from 2,192-99 feet.

Creek County

Sovereign Oil Co.'s No. 1 Cox, SE cor. NW NE Section 1-14-9, is a rig on the ground. S. W. Anthony's No. 5 Muskogee, NE cor. Section 9-16-12, spudding. H. E. Dowd and others' No. 1 H., Sapulpa, twin, spudding. Gled Oil Co.'s No. 2 Holmes, SW cor. NE Section 25-19-8, old well drilling deeper, total depth 2,267 feet. Windsor and others' No. 1 Anthis, NE cor. SW Section 25-19-8, is a location. Tulsa Oil Co. and others' No. 3 Purcell, CEL NW NE Section 22-19-9, was spudding. Johnson Oil & Refining Co.'s No. 4 Evans, SW cor. SE NW Section 29-19-9, made 100 bbls. from 2,187-2,224 feet. Same company's No. 5 Evans, SE cor. NW NW Section 29-19-9, is a rig. Same company's No. 1 Boyd, NW cor. NE SW Section 29-19-9, is a location. Same company's No. 1 Mann, SE cor. NW SE Section 32-19-9, old well drilling deeper, is a rig. Gled Oil Co.'s No. 4 Boyd, NW cor. NE NW Section 29-19-9, is a machine. Holmes Oil Co.'s No. 1 Groves, NE cor. NW SE Section 30-19-10, was spudding.

Hughes County

Mid-Continent Petroleum Corp.'s No. 3 Tiger, SE cor. NE Section 9-7-8, is a rig on the ground. Nash and others' No. 3 Robertson, SE cor. SW Section 15-5-11, is a rig. Manahan and others' No. 1 Long, SW cor. SE SW SW Section 10-7-8, is a rig. Fleetborn Oil Co.'s No. 1 Foster, NW cor. SW Section 14-7-8, is a rig. Radial Oil Co.'s No. 1 Foster, NW cor. SW SW Section 14-7-8, was rigging up. Limestone Oil & Gas Co.'s No. 4 Walker, SE cor. NE NE Section 15-7-8, is a machine.

Logan County

J. S. Cosden Oil Co.'s No. 1 Gardner, NW cor. NE Section 31-19-4w, old well drilling deeper, total depth 5,955 feet, rigging up.

Lincoln County

Amerada Petroleum Corp. and others' No. 1 Laffoon, NE cor. SE NE Section 9-13-6, is a rig.

Marshall County

Centrop Corp.'s No. 1 Burge, NE cor. SE NE SE Section 25-7s-5, is a machine. L. H. R. Oil Co.'s No. 1 Flint, NW cor. SW NW SE Section 3-7s-6, made 5 bbls. from 795-826 feet. Southworth-Harvey's No. 1 Howard, NE cor. SE NE NE Section 10-7-8, was abandoned at 320 feet. McCrory and McCrory's No. 1 Whitworth, SW cor. Section 24-7s-5, was abandoned at 510 feet. Mid-Co. Service's No. 1 Steele, NW cor. SE NW SW Section 11-7s-6, was abandoned at 858 feet. White Oak Oil & Gas Co.'s No. 1 Burge, NE cor. SE NE SE Section 25-7s-6, was abandoned at 583 feet.

Muskogee County

Beland and others' No. 10 James, NW cor. SE SE Section 18-14-17, was spudding.

Noble County

L. Rollins and others' No. 1 Frank, SE cor. SW Section 6-20-2w, was digging cellar, Stanolind Oil & Gas Co.'s No. 1 Kobb, C NE NW Section 33-20-2w, is a location.

Okmulgee County

N. S. Pittinger and others' No. 13 Conner, NE cor. NW Section 6-14-15, was drilling at 500 feet.

Osage County

Bay Oil Co.'s No. 1 well, SW cor. SE Section 25-24-7, is a rig on the ground.

Pawnee County

F. E. Harris and others' No. 1 Cunningham, NW cor. SE Section 7-20-10, was abandoned at 630 feet. Malarkey and others' No. 12 McClure, NW cor. SW Section 17-21-8, made 100 bbls. from 1,628-71 feet.

Pontotoc County

Ligon and Todd's No. 2 Starrit, SW cor. SE SE Section 29-5-5, is a rig. Lake Oil Co.'s No. 2 Mallory, SW cor. NW SW Section 30-5-5, is a rig. Stanolind Oil & Gas Co.'s No. 4 Roberts, SW cor. NW NE Section 32-5-5, is a rig.

Stephens County

G. Pace and others' No. 3 Enlow, SE cor. NE SE SW Section 21-2s-7w, is a location. J. Ray and others' No. 1 Johnson, SE cor. NE NW Section 6-3s-5w, was abandoned at 2,820 feet.

Seminole County

Sinclair Prairie Oil Co.'s No. 5 Baker, SE cor. SW NE Section 24-9-5, old well drilling deeper, drilling at 4,234 feet. Phillips Petroleum Co.'s No. 5 Fixico, SE cor. SW NW Section 20-9-6, made 772 bbls. from 2,722-45 feet. Amerada Petroleum Corp. and others' No. 6 Chase, SW cor. NE SW Section 29-9-6, made 1,742 bbls. from 4,094-4,114 feet. The Texas Company's No. 4 Sandlin, NW cor. SE SW Section 29-9-6, made 1,220 bbls. from 4,125-50 feet.

Tulsa County

C. Steep's No. 1 Boley, CEL SW SE Section 32-19-12, is a machine. Bryan Petroleum Co.'s No. 1 Hill, NW cor. SE SW Section 8-17-13, is a machine. Aggis Drilling Co.'s No. 2 Ticharns, NW cor. SE NE Section 13-16-13, made 15 bbls. from 1,488-1,514 feet.

Wagoner County

Bolin and others' No. 1 Bird, NE cor. Section 27-18-15, is a machine. Horner and others' No. 1 McIntosh, NE cor. NW Section 22-18-15, was spudding. Lambert & King's No. 1 McIntosh, NE cor. SE Section 22-18-15, was abandoned at 1,050 feet. C. D. Bradley's No. 1 Jacobs, NE cor. SW Section 7-15-17, was abandoned at 1,520 feet.

AN ARKANSAS WILDCAT

BRINKLEY, Ark., Oct. 17.— B. F. Thompson of Pittsburgh, Pa., and others have spudded in a test on the Rosser farm, SE SE, Section 7-5n-2e, Woodruff County, and surface casing is being set. The well is being drilled on the same 40 acres and 600 feet west of a well that was plugged but which is said to be producing gas through the plugging material. Mr. Thompson declares that the Rosser well will be a thorough test of all the formations underlying the area, if commercial production is not found on the way down.

Wildcat Operations in Oklahoma

Northern Oklahoma

ALFALFA COUNTY

Company, farm and location— Remarks:

Smith Brothers' No. 1 Forbes, SE cor. NW NW Sec. 12-27-11w ..... S.D. 1,232 ft.

J. W. Bailey's No. 1 Acre, SW cor. NE Sec. 14-24-11w... S.D. 6,502 ft.

ATOKA COUNTY

Barton's No. 2 Miller, NE NW SE SW Sec. 26-1-14 ..... S.D. 165 ft.

Hick's No. 2 Morris, SE NE NW SE Sec. 5-1-15..... Drlg. 165-85 ft.; shot 80 qts.; T.D. 210 ft.

George's No. 1 Reddin, SW NE SW Sec. 19-1-15..... Drlg. 330 ft.

BECKHAM COUNTY

Pattel Royalty's No. 1 Goose Tree, SW SE SW SE Sec. 32-10-23w ..... S.D. 924 ft.

Mid-Texas Co.'s No. 1 Sidell, NE cor. SW SW Sec. 17-22-22w ..... S.D. 2,550 ft.

White et al's No. 1 Green, SW cor. Sec. 34-10-24w..... S.D. 3,575 ft.

BLAINE COUNTY

Watonga Petroleum Co.'s No. 1 Masters, SW NW NW, Sec. 27-16-11w ..... S.D. 672 ft.

CADDO COUNTY

Abernathy & Brown's No. 2 Houston, Sec. 24-6-13w ..... S.D. 1,115 ft.

CHEROKEE COUNTY

La Piere et al's No. 1 Woods, C SE SE Sec. 27-17-21 ..... S.D. 1,504 ft.

COAL COUNTY

Dodd & Burton's No. 1 Grigsby, NW SE NE, Sec. 35-1-8. Rig.

Funk & Russell's No. 1 Miller, SE NE Sec. 10-2-8 ..... Fishing 2,630 ft.

COMANCHE COUNTY

G. W. Stogner's No. 1 Doebel, C SW SW Sec. 3-3-9w..... S.D. 1,450 ft.

CREEK COUNTY

O. O. Owens' No. 1 fee, NW cor. Sec. 23-15-7 ..... Drlg. 550 ft.

E. L. Jillson et al's No. 1 Starr, SE NW Sec. 18-16-8..... Drlg. 3,520 ft.

CUSTER COUNTY

Miley Pet. Co.'s No. 1 Caldwell, NE Sec. 12-14-14w..... Location.

ELLIS COUNTY

Algers Pet. Co.'s No. 1 Roper, C SE NW Sec. 21-20-24w.. S.D. 50 ft.

GRADY COUNTY

English Drlg. Co.'s No. 1 Heenan-Coe, NE SE NE, Sec. 32-3-7w ..... Show oil 3,255-87 ft.; to test drlg. out cmt.; swbd. 3 bbls. per hr., est. at 50 bbls. daily; running tubing to pump.

GARFIELD COUNTY

E. L. Love et al's No. 1 White, SE cor. NW Sec. 9-24-6w.. S.D. 5,850 ft.

GREER COUNTY

French's No. 1 Murphy, SW NW Sec. 23-7-21w..... S.D. 1,645 ft.

HASKELL COUNTY

Ault et al's No. 1 Hall, NW SW SW Sec. 14-9-19 ..... S.D. 2,000 ft.

Ault et al's No. 1 Hall, SE NW Sec. 25-19-9 ..... S.D. 200 ft.

KAY COUNTY

Bluebaugh et al's No. 1 Indian, C NW NE Sec. 30-25-1.. T.D. 2,607 ft.; P.B. to 2,569 ft.; comp. 5,500,000 ft. of gas 2,556-69 ft.

Lewis et al's No. 1 Harris, SE NW Sec. 14-25-1 ..... Location.

Mummert Drlg. Co. et al's No. 1 Cormick, C NW SE Sec. 9-27-2 ..... S.D. 3,693 ft.

Blackwell Oil Co.'s No. 1 Harshman, Sec. 2-26-1w ..... Rig on ground.

KIOWA COUNTY

McWhirter Bros.' No. 1 Kline, SE NW, Sec. 5-6-16w.... S.D. 830 ft.

Christian's No. 1 Jones, NE SE Sec. 8-7-18w ..... S.D. 1,610 ft.

LINCOLN COUNTY

Sovereign Oil Co.'s No. 1 Flowers, SW SE SE Sec. 14-12-3. Drlg. 4,350 ft.

LOGAN COUNTY

Eason Oil et al's No. 1 Gun Club, NW NE Sec. 10-16-4w. Drlg. 3,290 ft.

NOBLE COUNTY

Wentz Oil's No. 1 Wolff, C SE NW Sec. 17-20-2w ..... Drlg. 5,130-78 ft.; second Wilcox 5,193-96 ft.; flowed 1,817 bbls. 24 hrs.; will take a 10-day potential.

OKLAHOMA COUNTY

Carter Oil et al's No. 1 Shawbell, C SW NE Sec. 1-12-4w. Rig.

Citizens Oil Co.'s No. 1 Sage Barber, NE cor. Sec. 21-11-3w ..... S.D. 1,200 ft.

L. C. Hivick's No. 1 Sunset Addition, NW SW NW Sec. 17-11-3w ..... S.D. 5,515 ft.

PAWNEE COUNTY

Rookstool's No. 1 Wylie, NW NE SW Sec. 6-20-5 ..... S.D. 1,950 ft.

PITTSBURG COUNTY

Moffett & Hall's No. 1 Jones, NW cor. Sec. 14-8-14 ..... S.D. 1,675 ft.

PONTOTOC COUNTY

Blackwell Oil & Gas Co.'s No. 1 Abbott, NW SW NE Sec. 14-4-6 ..... U.R. 930 ft.

Williams' No. 1 Krath, NE SE Sec. 33-3-4 ..... Drlg. 890 ft.

Edna Marie's No. 1 McWhirt, NE SE Sec. 11-2-6..... S.D. 570 ft.

Sunray Oil's No. 1 Grant, SE NE Sec. 11-4-8 ..... S.D. 2,562-70 ft. water.

POTTAWATOMIE COUNTY

Brown et al's No. 1 Sauter, NW cor. Sec. 35-11-4 ..... Digging cellar.

ROGER MILLS COUNTY

Ute Oil Co.'s No. 1 Williams, C SW Sec. 23-12-24w ..... S.D. 5,150 ft.

L. C. Hivick's No. 1 Davis, C NW NE Sec. 4-11-26w..... S.D. 3,420 ft.

SEMINOLE COUNTY

Donnelly et al's No. 1 Shepard, SE NE Sec. 4-8-8 ..... S.D. 1,120 ft.

WASHITA COUNTY

Miley Pet. Co.'s No. 1 Montgomery, SW NW SE NW Sec. 23-9-17w ..... S.D. 1,004 ft.

Miley Pet. Co.'s No. 1 Wolfe, NE SW Sec. 23-9-17w..... Rig.

Cooper & Terhune's No. 1 Blocker, NW cor. Sec. 29-8-19w ..... Show oil 2,459-67 ft.; S.D. 2,757 ft.

Burns & Prince's No. 1 Deck, SW cor. Sec. 21-8-18 ..... S.D. 2,160 ft.

Oklahoma Panhandle

TEXAS COUNTY

Three Way Oil Co.'s No. 1 Crane, SW NW Sec. 11-1-18... T.D. 4,720 ft.; to cement

Southern Oklahoma

ATOKA COUNTY

Malarnee et al's No. 2 D.O.K. Land, C SE SE Sec. 35-2-13 ..... Rig.

Malarnee et al's No. 1 D. O. K. Land Co., C E half SE Sec. 35-2s-13 ..... S.D. 680-704 ft., est. 3 bbls.

E. B. Croxton's No. 3 Moore, CWL NW NW Sec. 2-1s-14. Abnd. 450 ft.

Morris et al's No. 1 Ray, NE NW NE, Sec. 3-2s-12..... S.D. 610 ft.

Brookshire's No. 1 R. W. Rowland, NW NE SE Sec. 18-3s-10 ..... Drlg. 2,900 ft.

BRYAN COUNTY

A. C. Hahnes et al's No. 1 White, NW NE NW Sec. 28-6s-8 ..... S.D. 1,542 ft.

JEFFERSON COUNTY

Bridwell's No. 1 Wolghomuth, NW NE SE NW, Sec. 30-6s-5w ..... S.D. 500 ft.

E. S. Bonner's No. 1 Burgess, NE SE Sec. 12-5s-8w ..... S.D. 750 ft.

MARSHALL COUNTY

Thomas' No. 1 Setliff, SW SE SE SW Sec. 36-5s-6 ..... S.D. 20 ft.

McCURTAIN COUNTY

Stampfs' No. 1 Robert Harris, SW NW SW Sec. 14-9s-25.. S.D. 2,778 ft.

PUSHMATAHA COUNTY

Whitehead et al's No. 1 Messer, SE SW SW Sec. 35-3s-18 ..... S.D. 1,950 ft.

STEPHENS COUNTY

Calif. Prod. & Oper. Co.'s No. 1 Florence, NE NW SE Sec. 11-3s-6w ..... S.D. 330 ft.

Calif. Prod. & Oper. Co.'s No. 1 Garnett, SE NE NE Sec. 11-3s-6w ..... Drlg. 290 ft.

Calif. Prod. & Oper. Co.'s No. 1 Suton, NE SE SW Sec. 12-3s-6w ..... Rig.

Gillette Bros.' No. 1 Cooley, NW SE NW Sec. 17-2s-8w... Spudding.

George's No. 1 Ryan, NW SW NE, Sec. 31-3s-15..... S.D. 510 ft.

The HUF-

SUPERSIZE PUMP

Plunger Valve is stationary and is connected to hold down connection by steel plunger tube.

Upper valve is close to ball and seat in plunger valve on completion of down stroke which prevents gas lock.

No trouble with pump sanding in. Fluid around seating device is agitated when pump is in operation.

Built to meet the demand for a capacity insert type working barrel, the HUF-SUPERSIZE Pump for 2½" tubing is run in and pulled out of well, complete, on sucker rods.

The outer tube with upper valve and lower bushing is the moving part of the pump. Outer tube is of maximum size, two inches inside diameter. Pump is 11'6" long, providing for 9-foot stroke.

With the locking arrangement shown, the pump will lock at either end of upper stroke or extreme end of down stroke. This feature provides means of making up sucker rods, should they part, or to unscrew rods when required.

Ask your dealer to show you the HUF-SUPERSIZE Pump. Write for circular.

THE CHARLES N. HOUGH MANUFACTURING COMPANY
FRANKLIN, PA.

Products That Cut Down Your Underground Overhead

Invitation to Members of the A.P.I.

Stop-over in TULSA *and join the Special* A.P.I. *Convention Train*

DON'T MISS OUT ON THE Pre-Convention "get-together" in Tulsa. That's where the crowd will meet to catch the special A. P. I. Convention Train.

Tickets reading either from St. Louis or Kansas City via the Frisco Lines or M-K-T Lines will be honored via Tulsa with stop-over at that point. The special A. P. I. Convention train leaves Tulsa 6:00 pm, November 14th, arrives Houston 7:45 am, the 15th.

THIS INVITATION is extended thru the courtesy of The Mid-Continent Oil & Gas Ass'n., Western Petroleum Refiners' Ass'n., Natural Gasoline Ass'n., Independent Petroleum Association of America.

"Aint THAT Somethin'?"
...Production 98.78% HIGHER per rod...breakage REDUCED 595.46% per string . . . when Reading Rods replace special rods in the Seminole!

SUCKER Rod Bill has another Reading record to crow about. In Wyatt Well No. 1, down in Seminole, special rods piled up 131 breaks in thirteen months, cutting down oil production to an average of 82 barrels per rod in the string. Then Reading Puddled Iron Sucker Rods were put in the hole—*and in the next thirteen months production was* RAISED *to an average of 145 barrels per rod, with only 22 breaks for the entire period!*

There's no wonder that operators are turning to Reading Rods, in these days when costs must be held down to a minimum. Time after time, Reading Rods have PROVED in actual service that they stay on the job far longer, cutting out the "grief" and insuring steady production. For Reading Rods have the toughness and stamina that has made genuine Puddled Iron famous through the generations.

Put Reading Puddled Iron Sucker Rods in your own wells—compare their service with that of other rods. It's a test that will save you money!

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PUDDLED IRON SUCKER RODS

Science and Invention Have Never Found a Satisfactory Substitute for Genuine Puddled Iron

Producers Approve of Production Cut in Kansas Which May Be Fixed at 88,000 Bbls. Day

By W. A. SPINNEY
Staff Correspondent, Kansas Fields

Between 250 and 300 individual oil producers and representatives of oil companies met in Wichita, Kans., October 15, to discuss ways and means of reducing oil production in the State.

The majority of the operators agreed to restrict their production as a step to strengthen the Kansas oil market. The producers voted to curtail oil production an additional 12 per cent, bringing the daily output of the State down to 88,000 bbls. instead of the present daily production which has been averaging around 100,000 bbls. daily.

Thurman Hill of the Kansas Public Service Commission announced that a meeting of representatives of the pipe line and refining companies would be held in his office in Topeka on October 19 for the purpose of arranging reductions in the crude oil nominations of purchasers. The cutting of production to 88,000 bbls. daily will be the state's share in a general program which the producers of Kansas, Oklahoma and Texas are putting into effect, to hold the production to market demand and prevent waste during the winter months.

Kansas' daily average production for the week ending October 15 shows an increase of approximately 2,000 bbls. which is believed due to the recent potential tests in the Voshell Pool in McPherson County. The State averaged 101,700 bbls. for the seven days.

New Hunton Lime Pool?

J. E. Mabee and Shell Petroleum Corp.'s No. 1 Nickel, NE cor. SW, Section 33-21-3w, in the southern part of McPherson County, a wildcat about 1½ miles south of production in the south extension area of the Voshell Pool, in the same county, appears to have opened a new Hunton lime pool. The well has apparently drilled itself into the pay and was flowing at the estimated rate of 50 bbls. an hour. The tools were only about a foot in the pay horizon where it was producing only about 20 bbls. of oil an hour and it later increased to 50 bbls. an hour without deeper drilling. The production was estimated as there has been no chance to gauge the well.

It is the second locality in the State where oil has been found in the Hunton lime. The first area to produce from the Hunton lime was the Hollow Pool, in Harvey County, which is about 4½ miles to the south of this well. The test missed finding oil in the chat. The 6-inch casing was landed at 3,342 feet and at 3,467 feet the well started flowing from the Hunton lime. Tanks were erected and a production test will be made.

Reduce Allowable in Hollow

The allowable production of the Hollow Pool in Harvey County was reduced on October 8 when the Derby Oil Co. withdrew as a purchaser in that field. The allowable was reduced from 179 bbls. per well to 94 bbls. per well a day. The Skelly Oil Co. and the Hollow Pipe Line Co. are the only purchasers in the field. The field has eight completed wells.

Skelly Oil Co.'s No. 2 Leisman, SW cor., Section 20-27-10w, Kingman County, found the Kansas City-Lansing lime at 3,367-78 feet. It was preparing to land and cement casing at 3,378 feet before drilling deeper into this formation. The well is expected to be completed in this formation.

Another location was announced for a test in the Holyrood area of Ellsworth County. Grimm and others' No. 1 Herejk, SW cor. SE NE, Section 17-16-10w, is a location.

Activity has increased in Kansas with 17 new operations reported in 10 counties. The list includes Greenwood County, with a total of five; McPherson County, three; Russell County, two; Rice, Harvey, Woodson, Sedgwick, Elk, Stevens and Cowley Counties, one each.

Location has been made for Louisville Gas & Construction Co.'s No. 1 Phillips, C SE Section 11-35-35w, Stevens County. This is the only active operation in the county and is south of the gas production in the Hugoton gas field.

The completion of the only well now drilling in the Welch Pool, in Rice County, is expected during the next few days. It is Rogers & Wilhelm's No. 1 Rainey, NE cor. SE SW Section 6-21-6w, which was drilling at 3,150 feet. This well when completed will extend the producing area one location to the southwest, from the Rogers & Carpenter's No. 2 Rainey which is being pumped daily. The test has been logging favorably with the other producers in the field.

Showing in Marion

R. E. Youker and others' No. 1 Melcher, SW cor. SE Section 20-18-4, Marion County, found oil in the chat at 2,390-98 feet. Oil started rising in the 5-inch hole. The operators of this well have approximately 4,000 acres of leases around this well. It is located about 8 miles south of the Lost Springs Pool, in the same county. No estimate was made of the size of the well.

A semiwildcat test was announced in the area southwest of the Hollow Pool, in Harvey County, H. L. Turner, J. R. Cary and others' No. 1 Engler, NW cor. SE Section 30-22-3w, a half mile east of the Reno County line. It is about three-quarters of a mile southwest of the production in the Hollow Pool. The location is believed to be on the Abilene Arch, which extends through Harvey, McPherson and Reno Counties.

Acre Oil Co.'s No. 1 in the NW cor. NE Section 21-21-3w, McPherson County, and No. 1 in the NE cor. NW Section 21-21-3w, are both new locations south of the recently completed Mylius and others' Wilcox sand well in the same section.

New Work in McPherson

As the result of recent good wells in the southern part of McPherson County increased activity has taken place in that county. Approximately 12 new operations have started or locations have been made. Mylius and others' new Wilcox sand well and J. E. Mabee's well, about 1½ miles south which found its production in the Hunton, are believed to be the cause of the increased activity.

The following operations are now drilling or locations have been staked in the area: Shell Petroleum Corp.'s No. 1 Santa Fe, NW cor. SE SE, Section 16-21-3w, was drilling around 2,975 feet; Shell Petroleum Corp. and others' No. 1 in the SW cor. SE, Section 16-21-3w, was drilling below 2,650 feet; Rosespring Oil Co. and Shell Petroleum Corp. has made a location in the NE cor., Section 21-21-3w; Derby Oil Co.'s test in the NE cor. NW SE, Section 24-21-3w, is estimated at 550 bbls. daily from the chat; All States Oil Co. in the SE cor. SW NE, Section 21-21-3w, was spudding; The Texas Company in the SW cor. SW SW, Section 21-21-3w, was drilling below 2,400 feet; W. C. McBride, Inc. in the NW cor. NE NW, Section 28-21-3w, was spudding; same company in the NE cor. NW, Section 28-21-3w, was a producer flowing around 300 bbls. daily; Mid-Kansas Oil & Gas Co. in the NE cor. SE NE, Section 33-21-3w, is a location; Aylward-Madison's No. 1 Krehbiel, SE cor. NE SE, Section 29-21-3w, was drilling at 2,500 feet.

Important Exploratory Work

Central western Kansas continues to be an important prospecting area. Two wildcat tests in this district are nearing the pay horizon. These tests are expected to extend the production in the northern part of the Ellsworth-Barton Arch in Ellsworth County.

In Morgan and others' No. 1 Andrews, NE cor. SW, Section 3-17-8w, Ellsworth County, casing was cemented at a total depth of 3,102 feet, and the crew was expected to resume drilling in a few days. The test found what was estimated to be 200,000 feet of gas at 1,200 feet and a showing of oil in the Oswald lime at 2,810-25 feet. The top of the Oswald lime was found at 2,760 feet.

Phillips Petroleum Co.'s No. 1 Hochman, NE cor. NW SE, Section 17-16-7w, Ellsworth County, was also underreaming the casing at a total depth of 2,932 feet. A showing of gas was found in this test at 1,855 feet and the top of the Oswald at 2,600 feet.

Gurley and others' No. 1 Union Pacific, NW cor. SW, Section 7-14-7w, Ellsworth County, was shut down at 1,075 feet. Walker and others' No. 1 Remley, SW cor. SE NE, Section 23-14-7w, Ellsworth County, was shut down at a total depth of 3,485 feet. Viking Oil Co. and others' No. 1 Satran, C NW SW, Section 5-14-9w, Ellsworth County, was completed for 100,000 feet of gas at 1,265-85 feet, total depth 1,385 feet. Bickford and others' No. 1 Burke, C NE SW, Section 14-14-9w, has spudded. R. Gera and others' No. 1 Kraboth, SE cor. NW, Section 12-15-10w, Ellsworth County, was drilling at 1,375 feet. The outcome of these tests is expected to have considerable bearing on the future activities in Ellsworth County.

The 49 completed wells in the central Kansas area including five counties have a daily potential of 49,291 bbls. but were permitted to produce only 102,822 bbls. for the period from September 1 to October 1. The majority of these producers do not have any pipe line connection.

The wells in this part of the State in the five counties, producing from the

(Continued on Page 75)

Wildcat Operations in Kansas

(Descriptions are East unless marked otherwise)

BARTON COUNTY

Company, farm and location—	Remarks:
Rankin's No. 1 Sooey, C SW NE Sec. 34-18-12w	Location.
Doherty et al's No. 1 Roesler, SW NE, Sec. 11-18-11w	S.D. 1,975 ft.
Smith et al's No. 1 Wilson, C NW SW Sec. 13-18-14w	Drlg. 2,253 ft.
Skelton Oil Co.'s No. 1 Ott, C SE SE Sec. 16-19-14w	Set liner 3,530-46 ft.; show oil; drlg. 3,605 ft.

BUTLER COUNTY

Cameron-Great Basin Oil Co.'s No. 1 Landon, C SE NW Sec. 13-28-2	U.R. 2,975 ft.
Ramsey's No. 1 Michael, SW NW NW Sec. 18-27-3	Drlg. 2,350 ft.

COFFEY COUNTY

Baker et al's No. 1 Hertig, NW SW SW Sec. 31-20-14	S.D. 2,051 ft.

DICKINSON COUNTY

Severs' No. 1 Livingood (O.W.D.D.), SE NW, Sec. 13-13-21	S.D. 4,810 ft.

DOUGLASS COUNTY

Pure Oil Co.'s No. 1 Limb, NW SE Sec. 31-14-19	Viola 1,762-1,816 ft.; drlg. 2,100 ft.

EDWARDS COUNTY

Mid-Kansas O. & G. Co.'s No. 1 Converse, SW NE NE Sec. 30-24-18w	Drlg. 4,980 ft.

ELLSWORTH COUNTY

Buckford's No. 1 Burke, C NE SW Sec. 14-14-9w	Spudding.
Viking Oil Co.'s No. 1 Satran, C NW SW Sec. 5-14-9w	S.D. 1,385 ft.
Gurley Bros. and Barnsdall's No. 1 Union Pacific, NW SW Sec. 7-14-7w	S.D. 1,075 ft.
Phillips Pet. Co.'s No. 1 Hochman, NE NW SE Section 17-16-7w	Drlg. 2,765 ft.
Morgan's No. 1 Andrews, NE SW Sec. 3-17-8w	Drlg. 2,535 ft.
Walker et al's No. 1 Remley, SW SE NE Sec. 23-14-7w	Drlg. 3,457 ft.
R. Gear et al's No. 1 Kroboth, SE NW Sec. 12-15-10w	Drlg. 455 ft.

FINNEY COUNTY

L. F. Meyers' No. 1 Brown, S SW Sec. 16-25-34w	Rig.
National Ref. Co.'s No. 1 Wells, C SW Sec. 13-23-30w	Abnd. 5,872 ft.

FORD COUNTY

Swain et al's No. 1 Henthorn, C NW Sec. 21-25-24w	S.D. 5,525 ft.

GRAHAM COUNTY

Schleimeyer et al's No. 1 Smith, SE Sec. 24-8-25w	Drlg. 3,175 ft.

HARVEY COUNTY

Liggett et al's No. 1 Davis, SW SE NE Sec. 7-24-1	S.D. 3,415 ft.
Herndon, Blair, Deep Rock, No. 1 Santa Fe, C NW Sec. 19-23-1	Drlg. 3,222 ft.

HASKELL COUNTY

Victor Martin et al's No. 1 Weeks, C NW Sec. 8-28-31w	Rig.

KINGMAN COUNTY

Panhandle Drlg. Co.'s No. 1 Wetheral, C SE NW SW, Sec. 20-28-10w	Set 12-in. csg. 1,610 ft.; S.D

LEAVENWORTH COUNTY

West et al's No. 1 Karb, C NW NE Sec. 32-10-21	S.D. 928 ft.

MARION COUNTY

Farrell et al's No. 1 Williamson, C NW SE Sec. 21-19-4	Machine.
Vernon et al's No. 1 Schmidt, C SW NW Sec. 35-19-1	Rig on ground.

McPHERSON COUNTY

Darby Pet. Co.'s No. 1 Pankratz, NW SE Sec. 5-20-1	Drlg. 2,320 ft.
Snyder et al's No. 1 Carlson, SE cor. Sec. 4-19-3w	Drlg. 1,975 ft.
Sidwell et al's No. 1 Nichols, NE NW NW Sec. 28-17-1w	S.D. 1,205 ft.

MORTON COUNTY

Hydraulic Oil Co.'s No. 1 State Land, NW SE Sec. 22, 34-43w	T.D. 3,640 ft.; temp abd

MORRIS COUNTY

Urschel et al's No. 1 Bersuch, NW SE NW Sec. 10-17-7	S.D. 1,385 ft.

NORTON COUNTY

Richards et al's No. 1 Colby, Sec. 17-4-21w	Rig.

OSAGE COUNTY

Briggs & Smith's No. 1 Wood, SE NW Sec. 21-14-15	S.O. 2,190-2,200 ft.; temp abnd

PRATT COUNTY

Ninnescah O. & G. Co.'s No. 1 Hardesty, SW SE SE Sec. 28-27-11w	W.O.C.S. 2,954 ft.

RENO COUNTY

T. L. Johnson's No. 1 Crotts, NE NW NE Sec. 27-26-10w	Rig.
National Union's No. 1 Hill, NE SE Sec. 18-24-4w	Location.
Martin et al's No. 1 Yadu, C NW NW Sec. 15-24-5w	S.D. 318 ft.

(Continued on Page 67)

Good Producer in Northeast Zwolle Extension; Operations in Mississippi and Alabama

By J. R. CRUMPTON
Staff Correspondent, Louisiana-Arkansas

SHREVEPORT, La., Oct. 17.—Although the 13 completions reported from this division during the past week yielded only one oil well and three gas wells, a spirit of optimism prevails among the operators due to the 12-cent increase in the price of crude. The price move, covering the fields of North Louisiana and Arkansas, was initiated by The Texas Company and at this writing has been met by two other major companies, the Gulf Refining Co. and the Magnolia Petroleum Co. That the price increase will stimulate activity is reflected by 21 new locations staked within the past week, some of them rank wildcats, and is further reflected by moves on the part of some of the major companies to revive pumping wells in several of the fields that have been shut down since the price slump in July, 1931.

NORTH LOUISIANA

This district reported nine completions, resulting in one oil well, one gas well and seven dry holes. The extreme northeastern extension of the Zwolle Field, north of Many, furnished one of the best producers from that area in several weeks. Coming Oil Co.'s No. 1 Williams, Section 31-8-10, is flowing at the rate of 600 bbls. daily through three-sixteenths inch choke from a total depth of 2,487 feet. The new producer is practically an offset to the original well in that area, and does not add any new producing territory. The Zwolle area reported a string of dry holes, five in number. J. H. Askew's No. 1 Lyons, Section 31-8-10, was dry at 2,760 feet and same operator's No. 1-E McNeely, Section 14-7-11, was dry and abandoned at 2,632 feet. Coates Petroleum Co.'s No. 4 Martinez, Section 3-7-13, on the western flank of the field, was dry at 2,519 feet. Two other wells in this area, Dengail Oil Co.'s No. 1-F Nulton, Section 2-7-13, failed to make a commercial pumper and was abandoned at 2,501 feet, and the same company's No. 2-G Nulton, Section 3-7-13, was dry and abandoned at 2,475 feet.

The gas well was furnished by the Sugar Creek Field in Claiborne Parish. Triangle Drilling Co.'s No. 1 Warren Brown, Section 1-19-6, was finally completed with an estimated flow of 5,000,000 feet of highly saturated gas from 4,490 feet. The old total depth of the hole is 4,722 feet, deepened from the Oolitic lime of the upper Trinity in an effort to increase the flow of gas or find an oil bearing sand. The well is evidently on the western edge of the structure, and pretty well defines the productive area in this direction. Another test in Claiborne Parish, on the northwestern edge of the old Haynesville Field, W. E. Rembert's No. 2 Hunt, Section 18-23-8, made a test in the Wilcox formation and was dry and abandoned at 1,050 feet. Production in the Haynesville Field comes from the Blossom around the 2,700-foot level. In Jackson Parish, the Southern Advance Bag & Paper Co.'s No. 4 fee, Section 19-15-3w, was abandoned without testing at 2,650 feet.

Converse Wildcat

Gibson & Johnson's No. 1 Frost Lumber Co., Section 19-9-13, a wildcat in the Converse area, Sabine Parish, is being rigged up to pump with an estimated production of 60 bbls. daily of 45.6 gravity oil. The oil is slowly flowing over the 8¼-inch casing but due to a bad casing seat, the operators deem it advisable to put the well on the pump rather than run tubing and let it flow with 78 feet of open hole below the casing seat. The paleontology on this 78 feet of open hole reveals some interesting facts. From 1,548-60 feet logs Zwolle marl, from 1,560-1,604 feet Saratoga chalk and from 1,604-1,626 feet, the bottom of the hole is sandy marl from which the pay is coming. This may be a break in the Saratoga chalk and more of this formation encountered deeper, but the fact remains that there is some sand in the formation from which the oil is coming, and the test has not yet penetrated to the Annona chalk from which production comes in the Zwolle Field, 10 miles southeast of the Converse area. There are three active rigs in this area, which promise to prove or disprove another chalk rock producing field in Sabine Parish, and probably open up a sand producing area around the 3,100-foot level. About 4 miles southeast of the Gibson & Johnson well, Cloud & Bolin's No. 1 Bowman-Hicks, Section 26-9-13, is checking somewhat lower than the former test. The latest report has this wildcat drilling in black shale above the chalk at 1,715 feet.

Mansfield Test

A wildcat in DeSoto Parish, 7 miles south of the town of Mansfield, which has been claiming the attention of North Louisiana operators for the past month, seems destined to open another producing area. Walters & Nicholson's No. 1 Guy, Section 3-11-13, after running a string of 2½-inch tubing, has made several heads, and is now standing with 1,800 feet of oil in the hole. The oil is of high gravity, testing 43.2. DeSoto Parish seems to be in for a thorough testing with 10 other operations in progress. Near the town of Grand Cane, in the northern part of the parish, Warren and Craig are rigging up on their No. 1 J. A. Wagner, Section 5-12-14. This is the second test for these operators in that vicinity, an area which has two gas wells and one small pumping well within a radius of 5 miles. Centering around Section 32-11-11, Mrs. A. L. Ibach has assembled 8,000 acres and has given a contract to drill a 3,500-foot test.

Other wildcats in DeSoto Parish follow: Jack Whitson's No. 1 Sanders, Section 19-11-13, is testing a show of oil at 1,467 feet. The top of the marl in this test was encountered at 1,282 feet and the top of the chalk at 1,355 feet. G. C. Smith and others' No. 1 Wollums, Section 30-12-12, is drilling in shale at 1,310 feet, and E. T. Oakes' No. 1 Johnson, Section 30-13-15, near Longstreet on the western border, is coring sandy shale at 4,160 feet.

There was a total of 19 new locations staked in the North Louisiana district during the past week, 13 of which were in the Zwolle Field. The Blanchard gas area reports two new tests in close proximity to the two producers in that newly opened field. In Bossier Parish, between the Bellevue shallow field and the Elm Grove Field, the Belmont Oil Co. has derrick up for a shallow test of their No. 1 Edwards in Section 12-18-12.

ARKANSAS

Two completions were reported from this State, both wildcats, but one had been temporarily abandoned for more than a year. In Hot Springs County, the Star Oil Co.'s No. 1 Cunningham, Section 11-5-16, was abandoned at 1,340 feet. A test in Little River County proved disappointing. Harrell-Stevens and others' No. 1 Taffee, Section 25-12s-32w, was dry and abandoned at 3,203 feet. One new location was reported from this district, B. F. Thompson's No. 1 Rosser, Section 7-5n-2w, in Woodruff County.

MISSISSIPPI

The Jackson Field in Hinds and Rankin Counties furnished two good gas wells during the week. In Hinds County, the Jackson Oil & Gas Co.'s No. 4 Mayes, Section 1-5n-1e, was completed with an initial estimated flow of 10,000,000 feet of gas from 2,415 feet. In the Rankin area, the Love Petroleum Co.'s No. 1 Hartfield, Section 6-5n-2e, had an initial flow of 40,000,000 feet of dry gas from a total depth of 2,420 feet. Two new locations were reported from this State, one a rank wildcat and the other a semi-wildcat near the Jackson Field. In Jasper County, B. B. Jones is rigging up on his No. 1 Bank of Philadelphia in Section 35-3n-12e. In Section 13-6n-1e, a few miles north of gas production in the Hinds County area of the Jackson Field, the National Gas Co. of Mississippi has derrick up on its No. 1 Mary C. Holder. The only test made on a wildcat was Stauffer & Kouri's No. 1 Bond, Section 18-2n-14w, Lamar County. With the bottom of the hole at 3,026 feet, the well tested 27 fourbles of salt water in 10 minutes with only a small show of gas. A wildcat about 8 miles south of the gas area in Hinds County, Love & Lancaster's No. 1 Elton Plantation, Section 17-4n-1e, is drilling in Wilcox at 2,850 feet.

ALABAMA

Three tests in this State in as many counties are actively drilling. In Lamar County, the DeSoto Development Co.'s No. 1 Gardner, Section 22-15s-16w, is drilling with cable tools at 3,226 feet. J. C. Prine's No. 1 M. & O. Railroad, Section 33-2n-4w, Mobile County, is drilling in lignite at 3,055 feet, and in Washington County, the South Alabama Oil & Gas Co.'s No. 1 Wilson, Section 26-7n-1w, is drilling in sandy shale at 1,850 feet.

Daily Average Runs

There was a net decrease of 740 bbls. in the daily average runs from the fields of North Louisiana and Arkansas during the past week. The daily average runs from the several pools were:

NORTH LOUISIANA

Caddo, light	5,195
Caddo, heavy	1,905
Cotton Valley	650
DeSoto-Red River	1,850
Elm Grove	405
Haynesville	4,115
Holly	255
Homer	2,720
Pleasant Hill	275
Sarepta-Carterville	820
Urania	3,500
Zwolle	8,075
Total North Louisiana	29,795
Total previous week	30,415
Decrease	620

ARKANSAS

Champagnolle	1,720
El Dorado	2,950
Lisbon	450
Nevada	900
Smackover, light	2,870
Smackover, heavy	23,649
Stephens	S.D.
Urbana	1,375
Total Arkansas	33,905
Total previous week	34,025
Decrease	120
Total both states	63,700
Total previous week	64,440
Decrease	740

Wildcat Operations in Louisiana-Arkansas

(Rotary operations unless otherwise designated)

North Louisiana

AVOYELLES PARISH

Company, well, farm name, section and block— Remarks:

T. J. Woodley, tr.'s No. 1 Thompson & Koltz, 2,640 ft. E, 300 ft. S, NW cor., Sec. 11-2n-5e ..... Drlg. 750 ft.

BEAUREGARD PARISH

DeRidder Development Co.'s No. 1 McMahan, 158 ft. S, 160 ft. W NE cor. NW, Sec. 33-2s-9w ..... S.D. 1,365 ft.

BIENVILLE PARISH

Black Lake Dev. Co.'s No. 1 Petty Stave Co., NW NW, Sec. 19-18-6w ..... Spudded in.

BOSSIER PARISH

Belmont Oil Co.'s No. 1 Edwards, 190 ft. N and E, SW cor. NE, Sec. 12-18-12 ..... Rigging up.

Breazeale & Steckoll's No. 1 Nattin, C SW NE, Sec. 15-23-14 ..... Set 6-in. 2,967 ft; T.D. 3,018 ft.

CADDO PARISH

Caddo-Prairie Dev. Co.'s No. 1 Nichols, 660 ft. N, 400 ft. E, SW cor. NE SW, Sec. 10-22-15 ..... Location.

Louana O. & G. Co.'s No. 2 Cushman, 250 ft. N and E, SW cor., Sec. 33-19-16 ..... Comp. 7,500,000 ft. gas 2,758 ft.

CALDWELL PARISH

Carter Bell's No. 1 Taylor, 150 ft. S, 150 ft. E, NW cor. NE SE, Sec. 17-14-4 ..... S.D. 3,713 ft.

CLAIBORNE PARISH

Louo Oil Co.'s No. 1 Kinder, Sec. 2-21-7 ..... Rigging up.

W. E. Rembert's No. 2 Hunt, Sec. 18-23-8 ..... Dry and abd. 1,050 ft.

Robertson & Aurand's No. 1 Smith, 200 ft. S and E, NW cor. SE NE, Sec. 4-21-7 ..... Rigging up.

DESOTO PARISH

Coker et al's No. 1 Boone, 300 ft. N and W, SE cor. SW NW, Sec. 12-10-11 ..... S.D. 60 ft.

Donley & Chastain's No. 1 H. Smith, 325 ft. W, 600 ft. N, SE cor., Sec. 31-14-15 ..... S.D. 2,470 ft.

Honeycut O. & G. Co.'s No. 1 Porter, 423 ft. S, 414 ft. W, NE cor. NW NE, Sec. 26-12-13 ..... Drlg. 1,232 ft.

S. A. Guy's No. 1 Dowling, 469 ft. E, 382 ft. S, NW cor. NE, Sec. 31-14-14 ..... Reaming to bottom 3,068 ft.

Mrs. A. L. Ibach, tr.'s No. 1 Rambin, 250 ft. S and E, NW cor. NE NE, Sec. 32-11-11 ..... Derrick.

E. T. Oakes' No. 1 R. H. Bryant et al, 200 ft. N and W, SE cor. NE NW, Sec. 30-13-15 ..... Coring 4,160 ft.

DeSoto Dev. Co.'s No. 1 Nickey, Sec. 7-13-13 ..... Partly rigged up and S.D.

G. C. Smith et al's No. 1 Wollums, 330 ft. N and W, SE cor. Sec. 30-12-12 ..... Drlg. 1,310 ft.

E. J. Stamberry's No. 1 Naborton O. & G. Co., Sec. 32-13-11 ..... S.D. for wtr. 800 ft.

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Coastal Interest Centered on Polk County Test; Tier of Virgin Counties In the Spotlight

By NEIL WILLIAMS
Staff Correspondent, Gulf Coast Fields

HOUSTON, Tex., Oct. 17.—Interest of Gulf Coast operators over the week-end was centered on the Sunshine district of southern Polk County where Dick Schwabb's No. 1 Carlton & Davis was preparing to test a broken sand and shale formation at 4,181-4,266 feet. At latest report the 6⅝-inch cement plug had been drilled out at 4,175 feet, screen had been set and tubing was being run. While, at this time, the outcome of the test is in doubt, general opinion among coastal operators is that the well is opening another important field along the Reynosa-Lagarto contact, sometimes called the "Jackson" trend.

On a drill stem test, reported in last week's issue of The Oil and Gas Journal, this well built up a pressure of 350 pounds in seven minutes, showing wet gas. Although no oil was shown in the test, the bottom of the cores were oil saturated. Such tests have been characteristic of the discovery wells of a number of the fields which have been opened along that trend and the behavior of this well has been very similar, especially to that of the well which opened the new Conroe Field in Montgomery County last December. Wet gas is found in the top of the producing horizon of the Conroe.

The formation in the Polk County well is believed to be the same as that from which the Conroe Field and also the Pettus Field of Bee County, Southwest Texas, is producing which has been identified as the Cockfield, which lies at the top of the Yequa. The same horizon is designated by some paleontologists as being the basal Dibollensis in the lower Jackson or that transitory age between the Jackson and Yequa.

Location of the new well is in the A. Viesca Survey in south central Polk County. The area had been looked upon as promising even since long before the Conroe Field was discovered and most of the available acreage has been leased up for some time. However, following the first showings in the well and the drill stem test there was a scramble by independent lease hounds who sought to pick up scattered open acreage. Several majors, including Humble Oil & Refining Co. and Shell Petroleum Corp. have large blocks in that district, the latter company having recently taken a large spread around the well itself.

A number of tests have been drilled in recent years in the Sunshine district and showings have been found in several and one well was completed early in 1930 as a small producer. It was able to swab and pump a little oil off and on but never was regarded as a commercial well. Another produced a small amount of gas for a time. That production was in a horizon around 3,300-3,350 feet, which was in the Hockleyensis, or middle Jackson. More recently, in July of this year, a deep test was drilled in the area by Collins & Plummer in their No. 2 Collins, which went to the Cook Mountain and was abandoned as dry at 5,260 feet. This was discouraging for production there but even with that it has been felt all along that there is something there.

Operators now are keeping their eye more than ever before on that tier of virgin counties extending eastward from Montgomery County and including San Jacinto, Polk, Tyler, Jasper and Newton. The half dozen or more wildcats now being drilled in those counties are of particular interest at this time, this interest having been increased not only by the Polk County discovery but also by the new field uncovered 10 days ago by Republic Production Co. and Houston Oil Co. on their Spurger block in eastern Tyler County. The latter's No. 1 Sterne fee, Adolphe Sterne Survey, whose completion as a good gas well opened the field, has been standing shut in. That well's completion in sand at a total depth of 4,708 feet was reported in the last issue of The Oil and Gas Journal.

Smith and others' No. 1 Mitchell, H.& T.C. Survey No. 8, wildcat near El Camp, which encountered two good gas sands, one at 3,082-3,102 feet and the other at 3,170-3,203 feet, and in which favorable drill stem tests were made, is drilling deeper. During the past week it found another sand at 3,402-12 feet and made a drill stem test but this, with the testing tool seated at 3,398 feet, got only mud with no oil or gas showing. At latest report it was coring sand at 3,689 feet. This well is being drilled on a geophysical block got together by Shell Petroleum Corp.

Closely following the discoveries in this test, which operators believe could have been completed as a gas well in either of the above mentioned sands, Gantt and others' No. 1 Laura Hahn, another rank wildcat located in the N. Mancho Survey on another geophysical block several miles to the north of the Shell block being drilled by Smith and others, cored a gas sand at 3,325 feet and is being watched closely. Both these blocks are in new territory for development although to the northwest of them across the line in Colorado County, Coyle-Concord Oil Co. completed a wildcat gas well earlier this year which is believed to prove a field of considerable extent. That well, in the middle of a 20,000-acre block, has been standing shut in since completion and no new tests have been drilled there.

Raccoon Bend

Important extensions were made in several coastal fields during the week. At Raccoon Bend, Austin County, Humble Oil & Refining Co. completed its No. 5 J. W. Wilson, William Harvey Survey, flowing 50 bbls. of pipe line oil an hour through a three-quarter inch choke from sand at 3,208 feet with 43 feet of screen. Pressure was 250 pounds on tubing and 600 pounds on casing. This well is approximately 1,000 feet to the east of production. It is the first test drilled there in over a year.

Conroe Field

New production continued to be added to the Conroe Field where development now is at a stage where wells are being brought in in rapid order. Five new producers were completed the past week and at the close of the week three or four others were due in. Gulf Coast Drilling & Development Co.'s No. 1 Keystone Mills, a 5-mile southeast extension test, which is in sand and shale showing oil and gas as reported last week and whose outcome is being watched, still is standing cemented with 7-inch casing at 4,985 feet. Bottom of the hole is 5,009 feet.

Among the several new locations made the past week at Conroe was one of particular importance. This was George W. Strake's No. 1 Lewis, 1,400 feet east of the west line and 2,200 feet north of the south line of the Lewis 665.5-acre tract in the Charles B. Stewart Survey. This well will be a marker for a southwestward extension of production, being approximately a mile south of the nearest well to the north on the present west side of the field and over 2 miles to the west of the nearest well to the east.

Effective October 15, the Railroad Commission placed a maximum allowable of 4,800 bbls. on the Conroe Field. At present there are 30 producing wells, which would make an average production of 160 bbls. per well. Daily production lately has been swelled to around 20,000 bbls. and operators now are waiting the outcome and enforcement of the new order. Alpha Oil Co., with two producing wells in the field, has had an injunction restraining the commission and the State from enforcing proration orders against its properties which has tended to upset previous attempts to control production there.

Under the new proration orders, maximum allowables have been set for 13 Gulf Coast fields, including Pettus and Refugio. Previously specific orders have been directed only at five of these, namely, Raccoon Bend, Sugarland, Conroe, Pettus and Refugio. The others, namely, Rabbs Ridge, Barbers Hill, Humble, Goose Creek, High Island, Hull, Pierce Junction and Spindletop have had no individual production restrictions on a field basis.

Second Good Well at Iowa

At Iowa, located on the Calcasieu-Jefferson Davis Parish line, Magnolia Petroleum Co. completed its second good producer and the fourth for the field. This was its No. 2 Waite, which came in flowing at the rate of more than 2,000 bbls. of pipe line oil daily from the pay at 6,900 feet. Pressure is 2,000 pounds. This well is north of the other producers. Shell Petroleum Corp., which has two wells in the field, is down 6,237 feet in its third test, No. 2 Fontenot, and should be in the pay within less than two weeks.

Rabbs Ridge

In the north extension district of Rabbs Ridge, Fort Bend County, The Texas Company the past week brought in its second good producer, making the third for the area. This well was No. 2 Wolters, which flowed at the rate of 83 bbls. the first hour through a one-half inch choke from sand at a total depth of 5,280 feet. Location has been made by this company for its third test, No. 3 Wolters, 750 feet to the north of No. 2. In the main field, Gulf Production Co. and Humble Oil & Refining Co. have completed their joint No. 3 T. R. Booth, which also flowed 83 bbls. an hour through a one-half inch choke from sand at 5,200 feet.

Ariola Area

Houston Oil Co.'s No. 1-X fee, offset to Houston Oil Co. and Republic Production Co.'s No. 1 Ariola fee, recently completed discovery well of the Ariola area, eastern Hardin County, late in the week was drilling in salt at 4,267 feet. Salt was topped at 4,123 feet. The discovery well also found the salt, drilling in broken sand, anhydrite and salt to 4,324 feet, from which depth it was plugged to the producing sand at 4,157 feet. Three other tests are drilling at Ariola.

Gulf Coast Fields and Wildcats

Week Ending October 15

Company, farm and location—	Remarks:
RACCOON BEND—AUSTIN COUNTY	
Humble Oil & Ref. Co.'s No. 5 J. W. Wilson, Wm. Harvey Sur., 2,380 ft. southeasterly along NE line from N cor. of tract and thence 412 ft. southwesterly at right angles	Set 43 ft. of 5-in. screen 3,208 ft.; comp. flowing 50 bbls. hourly, ¾-in. choke; 250 lbs. on tubing, 600 lbs. on csg.
DAMON MOUND—BRAZORIA COUNTY	
Intercoastal Oil Co.'s No. 10 Wisdom, A. Darst Sur., 440 ft. from NW line and 170 ft. from SW line of tract	Gumbo 825 ft.
WEST COLUMBIA—BRAZORIA COUNTY	
The Texas Company's No. 7 Abrams (W.O.), George Tennille Sur.	Set 24¾ ft. of 3-in. screen 3,171 ft.; swabbed S.W.; drlg. deeper in sand and shale 3,304 ft.
BARBERS HILL—CHAMBERS COUNTY	
R. E. Ferrell's No. 2 Wilburn, Henry Griffith League, 215 ft. W of No. 1 in center of 45-acre tract	T.D. 3,000 ft. in shale; fishing.
Humble Oil & Ref. Co.'s No. 1 Kirby, Henry Griffith League, 208 ft. from S line and 100 ft. from E line of lease	Drlg. cap rock 1,341 ft.
Mills Bennett Prod. Co.'s No. 5 Means, Henry Griffith League, 200 ft. W of No. 4	Drlg. cap rock 1,366 ft.
Mills Bennett Prod. Co.'s No. 5 Kirby, Henry Griffith League, 400 ft. from W line and 41 ft. from S line of tract	Cap rock 894-996 ft.; cmtd. back to 865 ft.
Moody Corp.'s No. 1 Collier (W.O.), Henry Griffith League, 47 ft. N line and 25 ft. from W line of tract	Rig up to work over 5,076 ft.
The Texas Company's No. 3 Lawrence fee, Henry Griffith League, 740 ft. W of E line in C of tract	Derrick.
The Texas Company's No. 2 Wilburn (W.O.), Henry Griffith League, 70 ft. from N line and 330 ft. from E line of tract	Drill stem stuck 5,112 ft.
The Texas Company's No. 9 Wilburn, Henry Griffith League, 580 ft. E of NW cor. and 50 ft. S of N line	Derrick.
Texas Gulf Prod. Co.'s No. 4 Ilfrey, Henry Griffith League, 894 ft. from E line in C of tract	Drlg. cap rock 893 ft.
Texas Gulf Prod. Co.'s No. 11-A Kirby, Henry Griffith League, 1,090 ft. from W line and 226 ft. from S line of "A" lease	Salt 3,681 ft.; shut down.
Texas Gulf Prod. Co.'s No. 2 T. H. McLean, Henry Griffith League, 711 ft. from E line midway between C. Barber and McLean tracts on separating line	Drlg. salt 2,654 ft.
Texas Gulf Prod. Co.'s No. 3 Tarbutton, Henry Griffith League, 746 ft. from E line in C of tract	Rig.
Texas Gulf Prod. Co.'s No. 2 O. K. Winfrey, W. D. Smith Sur., 295 ft. N of SW cor. of A. E. Barber lease and 100 ft. W of E line of Winfrey lease	Drlg. cap rock 3,863 ft.
Yount Lee Oil Co.'s No. 4-A Zadie Fisher, Wm. Bloodgood Sur., 301 ft. from W line and 96 ft. from S line of tract	Drlg. hard sand 6,031 ft.

(Continued on Page 67)

Government Wells Pool, Duval County, Texas, Has 3,000 Barrel Well, Structurally High

By B. D. STEVENSON
Staff Correspondent, Southwest Texas Fields

SAN ANTONIO, Tex., Oct. 17.—Nichols and C.R.&M. Drilling Co.'s No. 2 Harris in the Tuleta Field in Bee County finally made a better showing than at first, and casing has been set. Total depth is 4,114 feet. Two drill stem tests indicated a near failure. The third with the tester set at 4,108 feet came in with 650 pounds pressure and when the tool was removed the drill stem carried 400 feet of oil. This well is 660 feet west of Coquat & Hawn's No. 1 Harris, and 1,000 feet south and 660 feet west of the discovery well of the field. Coquat & Hawn's No. 1 Harris made a 100-bbl. well at 4,098 feet. Nichols and C.R.&M.'s No. 2 Harris will probably be completed this week. It is the only active test in the field and until it comes in it is probable that nothing new will be started.

North Government Wells

In the North Government Wells Pool, northern Duval County, The Texas Company's No. 1 M. B. Johnson came in from sand at 2,234-63 feet for an estimated 3,000 bbls. per day. This makes it one of the best wells in the field and gets the sand the highest. It is a west offset, 660 feet from Hamill & Hamill's No. 1 Hahl, which came in a couple of weeks ago extending the field to the north nearly a half mile, and there is one other well, Highland Oil Co.'s No. 1 Lundvall, a quarter of a mile due north of Hamill & Hamill's well. These tests are in Survey 42.

The size of The Texas Company's well gives that end of the field a new start. Probably there is considerable to be learned as to the sands. This sand is at about the depth of the upper of the two sands of the field, but some believe the upper sand lenses out, and that this is really the lower sand. At any rate it is one of the best wells in the field and there is nothing to the north and northeast or to the west and southwest to indicate the limits of the field. It is well defined on the southeast, on the down dip side, with a water line.

During the week Luse and Russ made a location for No. 1 Hahl, 330 feet from north and west lines of the northwest of the southeast quarter of Survey No. 45, just a half mile due west of the salt water well located 150 feet from the north and west lines of the southwest quarter of Survey No. 46, which seemed to mark the southern end of the field.

The field is taking a northeast-southwest trend, and this new location is very important and interesting as it will test or help to test the extent to which the field will go to the southwest. The salt water well in Survey 46 is probably a little too far east and from the showing the field has made up to this time the new location in Survey 45 seems to stand a good chance of extending the field. The last producer on the southwest is The Texas Company's No. 2 D. J. Freer, 480 feet from the east line and 330 feet from the north line of Survey 45, and about a half mile northeast of the new Luse & Russ location for No. 1 Hahl. Both ends and one whole side of the field are thus far undefined by any dry holes.

Seacord & Putnam's No. 1 Wendt, 330 feet from the south and east lines of the NE NE, Survey No. 43, on the western edge of the North Government Wells Pool, is completed in sand at 2,274-2,313 feet for 56 bbls. hourly on quarter inch choke. It is one of the best wells in the field and is a further indication that the limits of the field on the west is an unknown distance away.

Following hard on the completion of The Texas Company's No. 1 M. B. Johnson on the north end of the field for a big well, the producing possibilities of the field are made to look very encouraging. The well is 480 feet north and 480 feet west of the Seacord & Putnam No. 1 Johnson which at 1,574 feet, producing gas and spraying oil, was the discovery well of the field. It has since been completed to the lower sands and is an oil well.

Another new factor in the Government Wells situation is the Bissonett & McGinley Corp.'s No. 1 Lundell, 200 feet from the east line and 660 feet from the south line of Survey No. 48, the location being a little over a quarter mile west of the most northerly producer of the original Government Wells Pool. It was reported completed for a small well in sand at 2,335-40 feet and has since gone on the pump and is rated at around 100 bbls. daily.

It has brought about a lot of speculation. Due to some gas wells on the west edge of the original Government Wells Pool it was thought by some that the gas marked the western line of oil production. This new producer may indicate an anticlinal structure with oil production on both flanks. There are no dry holes to cut off this producer from either the original pool or the North Government Wells Pool, 2 miles tho the northeast.

Seacord & Putnam owned the entire east half of Survey No. 48 and sold the south 80 acres to Bissonett & McGinley. Magnolia will drill an east offset to the new well and Seacord & Putnam have sold the NE NE, Survey 60, which is next south of Survey No. 48, to United Producers, Inc., of Wichita Falls and they will a start a south offset.

Outside of Seacord & Putnam, the Magnolia Petroleum Co. is the most interested in the matter of acreage in that part of the country.

The activity that has been expected along the Reynosa outcrop for some weeks is beginning to materialize. Several new tests are being started. C. B. Bunte, Inc., has a program of six tests, the farthest east being in central Waller County, on a high-powered block that has been worked for surface geology, core drilled and gone over with magnetometer and seimograph, the surveys all showing a good structure. Another is in central Austin County, one now drilling in northern Colorado County; another is to be drilled in DeWitt County and two others in Zapata, location for one of which has been announced.

H. J. Porter and others are starting a test in southern Karnes County about 6 miles north of the Pettus Field, for a Pettus sand test, in this same zone. Humble Oil & Refining Co. is interested and its geologists made the location.

V. G. Schimmel is working in eastern central McMullen County where he completed one 400-foot gas well and last week had one blow out at 773 feet and lost the hole.

In central Jim Wells County Crawford and Stanolind Oil & Gas Co. are drilling No. 1 Hoffman at 3,500 feet, and F. A. Lain is down around 2,000 feet in northeastern Jim Wells. In addition to these Slick-Seeligson has started the No. 1 Kaufman 8 miles northeast of the Pettus Field and in Goliad County.

Saxet Field

Two new sands stand a chance of being proven in the Saxet Field within the next few days. Oso Drillers, Inc., No. 3 Roark at 4,867 feet has set casing and Gulf Coast Oil Co.'s No. 2 Perkins and Lagasse has set casing and drilled in and is now testing at 4,887 feet and showed 1,700 pounds on tubing with the well not cleaned. It looks at least like a big gas well. The Oso Drillers' No. 3 Roark on drill stem test in 12 minutes showed eight fourbles of oil. It had light gas pressure which is considered more favorable for oil production. It is about two locations west of the Neal, Milton & Kepley's No. 1 Roark that showed for a big oil well, flowing through drill stem, in this sand but due to misfortunes and trouble in setting casing it failed to make a well.

There is no production in the field coming from that sand at this time and if these tests prove producers it will prove up about 2 miles in that sand east and west as the wells are that far apart.

Gulf Port Oil Co.'s No. 2 Frank Bliss is working on another sand at 4,759 feet and there it also is new as there is no production coming from a sand at that depth at this time. A drill stem test showed 12 fourbles of oil in 15 minutes and it set casing.

There are several new deals pending in this field. Earl Calloway has made location for four tests and a well is soon to be drilled on the Tule Lake property on the north edge of the field.

Laurel Field

South Texas Oil Co. (Phil Rosenberg) has completed No. 8 Laurel and is now starting a program of five wells to be drilled immediately to the east of the group of five producers and on State of Texas land. The entire product of this field is being shipped by rail and water to the Imperial Oil Co. refinery in Montreal, Canada, and laid down at the refinery stands about $2.09 per barrel. The field is thus far undefined by any dry holes and all the producers are huddled in a group in Block 10 of Survey 271 of Webb County. The new tests are to be drilled in Blocks 9 and 10 in Survey 270.

Thus far the only production in this field is that developed by Rosenberg who brought in the discovery well, but additional drilling is to start soon in the next survey to the north, No. 23, and the Montex Oil Co., also a Rosenberg concern has spudded in on a test in Survey 267 about 3 miles northeast, and the log of this well ought to show some interesting information. It is a little west of the Carolina-Texas Field.

Sal-Mar Field

Although no new production has been developed in the Sal-Mar Pool in Guadalupe County other than the discovery well which is producing from the chalk at about 2,024 feet, operators are not through. Several tests have gone to the chalk, and failing of production there have drilled to the Edwards and failed. George E. Smith's No. 1 Behring, located 300 feet south and 450 feet west of the discovery well failed in both formations and has been abandoned but he is moving a little to the east and is now down to the chalk at 2,018 feet in the No. 2 Behring and has set casing at 2,000 feet. Chalk was topped at 2,002 feet.

Wormser's No. 1 Hempel, about a half mile southwest of the discovery well, failed in the chalk and is now drilling for the Edwards. The J. T. Stover No. 1 Paul Hoffman, 2 miles southwest of the discovery well, was held up by bad weather and a fishing job but got the fish out late last week and was waiting for new drill stem before starting to drill again. Total depth was 1,890 feet.

Pat Armstrong has moved in tools in southern Gonzales County to drill the No. 1 Cardwell for Dave Watson, trustee. It is to be a deep test, possibly 6,000 or 7,000 feet.

Marts & Beavens have moved their rig 1,200 feet east and are starting No. 1 Sloop in northern Bastrop County, in the J. Burleson Survey. In two wildcat tests drilled they have found Serpentine formation but failed to get production, though proving that there is a Serpentine plug somewhere near and the new location for the No. 2 Sloop is a further effort to find the plug.

Wildcat Operations in Southwest Texas

Week Ending October 15

ATASCOSA COUNTY

Company, farm and location—	Remarks:
American Central Oil Co.'s No. 2 Mary McConnell, 150 ft. W of E line, 300 ft. S of No. 1, Blk. 138, W. C. M. Baker Sur., 3 miles W and 6 miles S from Somerset	T.D. 1,660 ft.; rig moved off.
G. W. Partee's No. 1 McCowan on intersection of Sections Nos. 38, 39, 48 and 49 of Subd. of Houlihan Sur.	T.D. 947 ft.; in sand.

BANDERA COUNTY

F. A. Brown's No. 1 R. B. Watson, 600 ft. N of cen. of S line of Sec. 71	T.D. 330 ft.; drlg.
E. A. Parkford's No. 1 Duke in NW cor. of Sec. 7, G.C.&S.F. Sur.	Location.

BASTROP COUNTY

J. E. Emanuel's No. 1 H. Klemm, 317 ft. from W line, 300 ft. from S line of tract in R. S. Teal Sur.	Rigged up and standing.
Marts & Beavens' No. 1 Sloop, 150 ft. from W line, 900 ft. from S line of tract in J. Burleson Sur.	T.D. 2,230 ft.; abnd.
Marts & Beaven's No. 2 Sloop, 1,200 ft. E of No. 1 Sloop, J. Burleson Sur.	Skidding rig from No. 1 Sloop.
Properties Trading Co.'s No. 1 Henry Freitag, 400 ft. from SE line, 1,800 ft. from NE line of P. Conley Sur.	T.D. 2,085 ft.; drlg.
Teas and Gant's No. 1 Mikulec, 330 ft. to NW and SW lines of tract in Wm. Barton Sur.	Derrick.

BEE COUNTY

Fitzgerald & Pryer's No. 1 Albert Johnson in M. Alcarte Sur.	Rigged up and S.D.
Nichols & Bruner's No. 1 Grover Heidenfels in John Bryan Sur., 891 ft. from S line, 1,950 ft. from E line of tract	T.D. 2,100 ft.; S.D. for fuel.
Southwest Drlg. Co.'s No. 1 Riggs, 200 ft. from N line, 4,200 ft. from E line of James Nowland Sur.	T.D. 140 ft.; set surface csg.

(Continued on Page 70)

Fewer Completions, Continuance of New Work, Are Reported From the Central West Fields

By GEORGE A. WHITNEY
Staff Correspondent, Central West Fields

FINDLAY, Ohio, Oct. 17.—But few completions were reported during the week in any of the divisions of the Central West Field, although there is no let up in new work over the areas, especially in Indiana, Central Ohio, Northwestern Ohio and Kentucky.

The old Lima Field of Northwestern Ohio is holding its own in completions and new work under way, there being four completions, all in the Tiffin Field of Seneca County. The Industrial Oil & Gas Co. drilled in a very light gas well in a second test on the H. W. Hunker farm, Section 11, Hopewell Township, the gas being struck from 1,430-83 feet. McPherson and others' No. 4 on the Frank Fox farm, same location, is only a 1-bbl. producer, also in the Trenton from 1,462-86 feet. J. H. Murphy & Sons also drilled in a very light gas well in No. 4 on the C. D. Knepper farm, same section and township, from 1,459-1,507 feet. In Liberty Township, also in Seneca County, Keiner & Foos found a very small gas well on the G. C. Niceswander farm, Section 14, at from 1,370-1,460 feet.

Wyandot County had quite an excitement over a report of a big well drilled by Jones & Coyle in No. 1 on the Margaret Brillhart farm, Section 28, Crane Township, which flowed after the shot, but like many other wells in later years in that county, failed to produce anywhere near what was reported. The well is credited with doing 25 bbls. of oil along with 30,000 feet of gas. Ridge Oil & Gas Co. is drilling on the G. O. Hiles farm, Section 7, Crawford Township, same county, and Newcomer and others are starting a test on the Albert Reber farm, Section 24, Pitt Township, same county. Harpster and others are still shut down at 1,350 feet on the L. G. Beis farm, Section 11, Crawford Township, same county.

CENTRAL OHIO

Half a dozen wells are reported completed in the Central Ohio Field, three being gas and three proving to be dry holes. In Lorain County, McMillan and others drilled in a nice gas well on the Niels Poulson farm, Section 15, Carlisle Township, in the Clinton lime at 2,415-34 feet. C. J. Minor is still shut down on the George Myers farm, Lot 41, Ridgeville Township. The depth of the hole at this time is 2,305 feet.

In Medina County, Edson Sons Co.'s No. 7 on the Dave M. Geisinger farm, in the Chatham Field, failed to find any Berea sand and is dry.

In Coshocton County, the Preston Oil Co. has a rig in for No. 2-1,519 on the D. S. Snyder farm, Newcastle Township, and is drilling No. 2-1,517 on the F. H. Donaker farm, Section 6, Perry Township, same county.

In Licking County the Wehrle Gas Co. has a gas well on the Milton Parr farm, Section 11, Franklin Township, at from 999-1,019 feet. Fred Eshelman is drilling a second test on the Stanton Wilson farm, Section 12, Mary Ann Township.

In Muskingum County the Fritz Oil & Gas Co. has a rig up for No. 3 on the Edward Middleton farm, Section 10, Brush Creek Township.

In Athens County the Standard Natural Gas Co. is drilling No. 2 on the J. N. Pickett farm, Section 12, Waterloo Township. I. C. Robinson is drilling No. 2 on the Alvin D. Cline farm, Section 13, Lee Township, same county. Chesmar Oil & Gas Co. are drilling on the Thomas E. Dickson farm, in fractional Section 4, Berne Township.

In Stark County, Brendal Producing Co. brought in an average gas well on the William and Clara Reikowski farm, Section 25, Jackson Township, in the Clinton from 4.396-4,434 feet. Same company is drilling No. 3 Charles Yearkey farm, Section 21, a test on the Robert Klein, Section 24, and has a rig in for No. 9 on the Lake Cable Co. farm, Section 22, all in Jackson Township. East Ohio Gas Co. made a location on the E. and E. Frank farm, Section 23, and for a second test on the John Wyles farm, Section 13, same township. In Osnaburg Township, Curry & Dewalt drilled a dry hole on the J. and O. Sweitzer farm, Section 1, finding salt water in the Berea sand from 847-52 feet. Brendall Producing Co. is drilling on the Diamond Portland Cement Co.'s property, Section 31, Marlboro Township, same county.

In Belmont County the O. K. Oil & Gas Co. found a dry hole in a second test on the Alice M. Adams farm, Section 29, Union Township, in the Maxon sand from 1,104-06 feet. Same company made locations for No. 1 on the J. T. Murphy farm, Section 29, also for No. 2 on the E. E. Brown farm, Section 35, same township. In Warren Township, Shay McMullen and others are drilling on the Orrin Lucas-Lallathin farm, Section 28. In Somerset Township, same county, A. C. Peters and others are drilling on the L. D. Mason farm, Sections 21 and 27.

In Guernsey County, Wheeling Township, E. C. Quillan and others are drilling on the Elmer E. Hamilton farm, Section 10.

INDIANA

Considerable work is being done over many counties of Indiana at this time and indications are for more activity before the winter. At this time drilling operations are covering areas in 37 counties. As for the finding of oil, the southwestern part of the State is the most active.

(Continued on Page 59)

Turner Valley Conservation Appeal Is Heard; Board Working on Unit Operation Plan

By VICTOR LAURISTON
Staff Correspondent, Canadian Fields

CHATHAM, Ontario, Oct. 15.—Official figures covering pipe line runs for Turner Valley Field for September show total deliveries to Imperial Oil, Ltd., and Regal Oil & Refining Co. of 40,737 bbls., a decline of more than 20 per cent from the August deliveries of 51,721 bbls., and less than half the deliveries for September, 1931. No deliveries to Bell Refining Co. have been reported since June. In addition to the refinery deliveries, considerable crude naphtha was sold direct at the well head; the September direct sales have not been reported, but those for August amounted to about 18,000 bbls.

The decline in deliveries was partly due to the intensive testing operations carried on in September by the Turner Valley Gas Conservation Board, and which particularly affected the South Turner Valley, normally the most prolific section. With the completion of the tests this month and the placing of the field on a permanent quota basis, some recovery in production may be looked for.

Central Turner Valley

In the Central Turner Valley, McLeod Oil Co.'s No. 4, LSD 16, Section 1-20-3w5, has finished strengthening the outfit and is making new hole below 7,600 feet on its record deep test of the field.

New McDougall-Segur's No. 15, LSD 14, Section 12-20-3w5, has been finished in the McDougall-Segur sand at 2,880 feet with a light crude production around 70 bbls. a day.

Bow Oils, Ltd., of Calgary has started work on the old Illinois-Alberta Oils' No. 1, deep lime producer, in LSD 14, Section 12-20-3w5. The well, drilling equipment and other assets of the New Illinois-Alberta Oils, Ltd., were acquired by Harry Oliver and associates of Calgary a short time ago, and the latter organized Bow Oils, Ltd. The new owners at last reports were cleaning around 3,615 feet.

South Turner Valley

In the South Turner Valley, Mar-Jon-Freehold's No. 1, LSD 9, Section 28-18-2w5, is drilling below 5,266 feet, with the Madison contact expected between 5,360-5,400 feet. Canadian Royalties' No. 1, LSD 9, Section 5-19-2w5, is drilling below 3,000 feet.

North Turner Valley

In the North Turner Valley, Model Oils' No. 2, LSD 16, Section 22-20-3w5, is redrilling at 3.290 feet after cementing back from 3,952 feet. Model Oils' No. 1, LSD 8, same section, is being permitted to operate on 900 pounds pressure pending a ruling of the Turner Valley Gas Conservation Board on the company's application to have the well classed as a crude oil producer and exempted from conservation restrictions. The well was placed on 1,200 pounds pressure, when its normal production of around 160 bbls. a day shut off entirely. Under 900 pounds pressure a production of 100 bbls. a day is looked for. The production is somewhat heavier than the normal crude naphthas of the Turner Valley Field and has been classed by the refineries as light crude oil. The gas production is comparatively small. United Oils' No. 4, LSD 2, Section 24-20-3w5, is reported cleaning out below 5,250 feet in an effort to recover a light crude production previously encountered in the Dalhousie sand.

Turner Valley Conservation

The appeal of Spooner Oils, Ltd., from the decision of Mr. Justice Ewing, who upheld the validity of the conservation measures in the Turner Valley Field, will be given a hearing before the appellate division of the Supreme Court of Alberta at Edmonton next week. The hearing opens on October 17. Pending the outcome of the appeal, the Turner Valley Gas Conservation Board is proceeding with its testing operations, which will be practically completed by the time the hearing opens. It is expected the case will be carried to the Supreme Court of Canada and the Privy Council. In the meantime, the conservation board will endeavor to work out some scheme for pool or unit operation.

Mill City Operations

Shareholders of Mill City Petroleums, Ltd., at their annual meeting held recently at Calgary elected the following officers: President, W. A. Davidson; secretary-treasurer, William Kemp; manager, A. H. Mayland; directors, W. S. Henderson, W. D. Ransom.

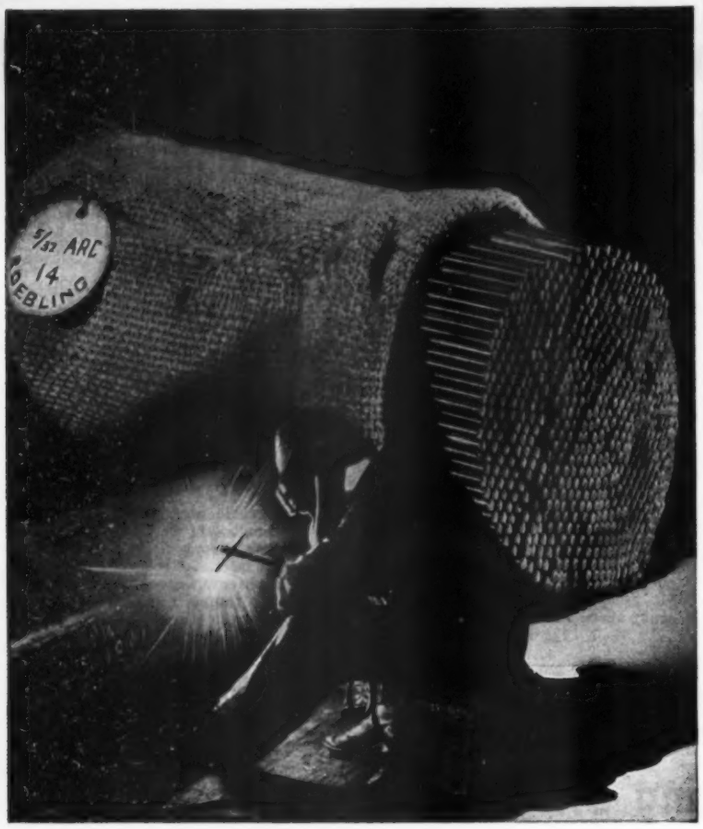
Moose Mountain Tests

On the Moose Mountain structure, northwest of Turner Valley, Elbow Oils' No. 1, LSD 11, Section 35-22-5w5, is drilling out cement, after cementing against caving at 3,640 feet. Graystone Consolidated's Signal Hill No. 2, LSD 9, Section 34-23-5w5, is pulling two strings of casing to underream from 2,000 feet. The hole bottomed at about 4,225 feet.

Twin River Test

On the Twin River structure, southeast of Lethbridge and close to the Montana border, location has been made for a new test in Nordon Corp. acreage in LSD 11, Section 2-2-20w4. The first test on this structure was drilled by Parco Oil Co., a Canadian subsidiary of the Prairie Oil & Gas Co. in LSD 16, Section 34-1-20w4. This test was on Nordon Corp. acreage, and the Nordon Corp. had a part interest in it. Twin River No. 1 got an oil show at 3,870 feet, just below the Ellis-Madison contract. On a thorough bailing test it yielded around 10 bbls. a day of high grade crude. Two shots failed to increase the production, and Parco Oil Co. discontinued active work in the Candian fields. It is stated that in spite of bridging following the last show, the well is still giving about 2½ bbls. a day.

Twin River No. 2 will be drilled jointly by Nordon Corp. and Cad A. Roney of Los Angeles. It is less than a mile north of the first well. Location was made by a seismograph survey, the first em-



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ployed in locating a test in Canada. The survey showed the lime to be about 200 feet higher than in No. 1. A combination standard rotary outfit will be used, the test being started with cable tools and finished with rotary. Fuel and water lines will be laid from No. 1 well, and the test is expected to spud in by November 15. Arthur I. Davis, consulting geologist, who is credited with the location of a number of fields in the California and Rocky Mountain areas, visited Alberta in connection with the location.

Keho Lake Test

In the Keho Lake district, northwest of Lethridge, Hudson's Bay Oil & Gas Co.'s No. 1 Keho, LSD 2, Section 17-11-22w4, has cemented back 20 feet from a depth of 4,865 feet. Sidetracking has been resumed. The test originally bottomed at 4,920 feet, where oil shows were struck below the Ellis-Madison contact.

The possibilities of this general area have been intensively examined by E. R. Lovewell, petroleum geologist, of Lethbridge, who has reported in part as follows:

"The importance of the regional syncline of the geosyncline in oil formation and accumulation is admitted by all who have studied the conditions under which the fields of major importance have occurred around the rims of the Appalachian geosyncline, the Permian Basin of West Texas, the San Joaquin Basin of California, the Oklahoma geosyncline, the East Texas syncline and the Maracaibo Basin of Venezuela, etc.

"The great geosyncline of Alberta, shown on Map 204-A of the Dominion geological survey as an area of Tertiary sedimentaries, has come under intensive study as a regional basin of great possibility for oil during the past few years, and especially since the discoveries of oil at Keho Lake and Twin River. In as much as the axis of this synclinal basin lies close to the west rim, the structures along the east rim have drainage areas of great magnitude, and where other conditions are favorable, will result in the discovery of oil fields of immense extent and richness.

"In the three test wells drilled recently along the east rim of the Alberta syncline (Keho Lake, Section 17-11-22w4) Texas-Imperial, Section 22-8-22w4, and Parco, Section 34-1-20w4; crude oil of 30 to 32 gravity was found in the top of the Madison lime at reasonable drilling depths in all three.

"The Texas-Imperial well at Lethbridge made only a small oil showing at 4,551 feet in the top of the Madison, and this was due, in my opinion, to the absence of a west closure to the 'nose structure' on which the well was drilled.

"At the Parco-Twin River well, 30 feet of Ellis sand and saturated porous Madison lime yielded what first looked to be a 150-bbl. well at a depth of 3,890 feet. Deeper drilling encountered a high pressure of water, and as the resulting difficulties may have closed off some of the producing horizon, the present 7-bbl. flow is not to be taken as a criterion of the potentialities. Further drilling here under the guidance of the geophysical survey, as announced by the Nordon Corp. will, I believe, result in large flowing wells.

"Oil was encountered at three horizons—3,680, 3,770 and 4,918 feet—in the Keho Lake well. The 3,770-feet horizon has been determined as the Bow Island gas sand, and this is said to be the only well in Alberta ever to have encountered oil in quantity in this horizon. The amount of oil was estimated at from 50 to 150 bbls. a day. The rock pressure, however, was low, with but little gas. This oil was cased off and deeper drilling then tapped the Madison lime at 4,918 feet. At 3 feet into this oil zone, gas flowed at the rate of 500,000 to 1,000,000 feet per day, and oil estimated at 200 bbls. a day rose in the well. In cementing the 8¼-inch casing, tools were lost in the hole, necessitating a sidetracking operation which is at present under way. A completion of this promising well is anticipated in the next few weeks. A large flowing well should result when the lime has been penetrated from 25 to 30 feet. The porous lime horizon at the Keho Lake should have an oil saturation of over 100 feet, as the shallow test work showed a reversal of some 136 feet and as various other factors of a favorable nature are believed to exist here."

Manitoba Test

In the Manitou district, southwestern Manitoba, Commonwealth Petroleums Pembina Valley No. 2, LSD 2, Section 26-2-9wPM, is resuming drilling in shale at 2,580 feet after installing new drilling lime.

British Columbia Operations

In the Kelowna district, British Columbia, Okanagan Oil & Gas Co.'s No. 1, Section 2-26-Osoyoos Survey, has practically overcome water intrusion and is reported making new hole below 2,520 feet. Further oil indications are reported.

In the Sage Creek district, Crow's Nest-Glacier Oil Co.'s No. 1 is standing at 3,260 feet, after redrilling to the oil horizon encountered in the original hole. The first test got good shows of light crude at this depth several years ago, but a bad shot blocked the hole, making it necessary to sidetrack and redrill. This work was recently completed to the original depth with a diamond drill outfit. Definite arrangements are expected by the end of October on drilling Nos. 2 and 3.

Fort Norman

A donation of 1,800 gallons of fuel oil was made by Imperial Oil, from its Fort Norman wells to the Anglican mission at Aklavik toward the cost of operating a powered X-ray machine in the new hospital there.

Saskatchewan Gas Prospects

C. L. Hatch and associates of Montana are reported interested in a project to develop natural gas production in western Saskatchewan close to the Alberta boundary. A drilling outfit has been unloaded at Walsh, Alberta, but details as to the location for the prospective test have not been made public. The territory on the Alberta side of the boundary is regarded as a good prospect for gas, but as the markets for any production which may be developed are in Saskatchewan and as difficulty is anticipated in regard to export from Alberta, the development will take place on the Saskatchewan side.

There has been a little drilling at various times in western Saskatchewan at locations extending from the international boundary to a point west of Saskatoon. The most important recent drilling has been in the Unity Valley, near Vera, where Unity Valley Oil Co., headed by R. H. Breckon of Calgary, some years ago drilled two tests in Section 23-41-24w3. Unity Valley's No. 1 rotary test struck some gas at 1,470 feet; this was cased off and the hole carried deeper for oil. Sufficient gas was forced up through the rotary mud to supply the camp, but the exact extent of the original flow was uncertain. Unity Valley's No. 2 is reported to have got a 60-foot sand with traces of oil between 2,100 and 2,200 feet but failed to develop commercial production. A Saskatoon syndicate drilled a third test in the same area without any important results. W. S. Herron of Calgary, who has been interested in several attempts to market Turner Valley gas to the Saskatchewan cities, was recently investigating the Unity Valley operations. A 130-mile line would be required to deliver gas from Unity Valley to Saskatoon.

The Ribstone-Blackfoot structure, which on the Alberta side developed heavy crude in four wells, extends east across the interprovincial boundary into Alberta. Leasing has been done and locations made on the Saskatchewan end of the structure, but no drilling was ever done there.

Ontario Drilling

In Dawn Township, Lambton County, Ontario, Union Gas Co.'s No. 64, Lot 24, Concession 2, is drilling in the salt below 1,445 feet. The Union company is also doing some lime testing further west in Sombra Township, as well as in Raleigh Township, Kent County.

F. H. Stover & Son of Chatham are

moving in an outfit for a test in E half N half Lot 19, Concession 8, Raleigh Township, Kent County. This location is near the center of the gas-producing area developed last year by the Olga Oil & Gas Co. of Toronto.

Central West Fields

(Continued from Page 57)

but some nice gas wells are being brought in in Gibson, Pike, Sullivan and other counties, the larger gas wells being found in Gibson and Pike Counties in the Princeton Field. Last week showed two excellent gas wells in this field, the best being Tressler, Moore and others' No. 1 on the Mary McCain farm, Section 18, Washington Township, Pike County, in the Alford Pool, with 2,500,000 feet, while in Gibson County the Knox Engineering Corp.'s No. 1 on the L. W. and E. T. Gudgell farm, in the NW of Section 23, Columbia Township, Gibson County, is estimated at 1,300,000 feet at 1,492 feet. Wyman and Brown's test on the Willis Bradbury farm, in Curry Township, Sullivan County, showed 500,000 feet.

In Hamilton County, Lantz-Miller, Trustees, struck a dry hole on the E. Applegate farm, Section 34, Jackson Township, and only a light showing of gas was found in the Trenton lime. Back in the early days of the development work in that county which is in the Noblesville Field, many nice gas producers were uncovered. James McMahan and others are shut down on the Nellie Graham farm, 5 miles north of Cicero and north of the old development of past years.

In Laporte County, V. S. Hollingsworth and others' test on the W. and C. Drollinger farm, north of the dry hole on the Siddles farm, south of New Carlisle and in Willis Township, Section 33, water was encountered in the Trenton lime and it has been abandoned.

New Work Starting

In Gibson County the Knox Engineering Corp. is drilling No. 2 on the L. W. and E. F. Gudgell farm, NW Section 23, Columbia Township. Same company is drilling No. 1 on the S. H. Kirk farm, NW Section 23, and No. 1 on the G. C. Sampley farm, in the SW Section 23, same township. Indiana Southwestern Gas Corp. is drilling on the Eunice C. Heldt farm, NE Section 23, same township.

In Pike County the Indiana Southwestern Gas Corp. is drilling on the Thomas H. Stone farm, SW Section 16, Jefferson Township. In Washington Township, same county, A. B. Bement has a location on the Andrew Willis farm, NE Section 13, and Claude E. Noble and others have a location on the Edward Adams farm, in the SE half Section 17, same township.

In Sullivan County, Turman Township, O. A. Thayer is drilling on the H. H. Wilson farm, NW Section 36, and J. A. McDonnell and others are drilling on the John Rose estate, in the NW Section 32. Jackson Hill Coal Co. is drilling on its own property, in the SW of Section 10, Jackson Township, same county.

In Spencer County the Santa Fe Oil Co. is drilling on the F. W. Grass farm, NE Section 11, Huff Township.

In Perry County, Roger E. Williams is drilling a second test on the Matt Gayer farm, NW Section 5, Anderson Township. George Porter is at work on the Charles Reed farm, SE Section 23, Troy Township, same county.

In Harrison County, the Indiana Utilities Corp. is drilling on the William Longbottom farm, SE Section 10, Webster Township.

In Allen County, Maumee Township, the Woodburn Gas Co. is drilling on the Fred Norden farm, in the NW Section 34, and not far from Fort Wayne.

In Hamilton County, the Knightstown Natural Gas Co. is drilling a second test on the Thomas L. Smith farm, near Charlottsville.

In Martin County, Sproul & Weitknecht is drilling on the John Larkin farm, Section 19, Perry Township.

In Monroe County Benton Township, the Petroleum Exploration Co. and the Ohio Oil Co. are drilling a wildcat on the William T. Howard farm, in the NE Section 19.

In Tippecanoe County the Coats Smith Oil Co. is drilling on the Methodist Episcopal Church property, in Section 27, Tippecanoe Township.

In Vanderburg County the Maxwell Petroleum Co. is starting a second test on the George Homby farm, NW Section 33, Center Township.

ILLINOIS

An important find was made in a wildcat by the Bond County Gas Co. on the Dorris farm, Section 29, Lagrange Township, Bond County, on the Ayres anticline, uncovering a gas well reported good for 1,000,000 feet from a depth of 915 feet. This well is less than a mile east of the Gullick test. The test of L. A. Painter and others on the E. M. Gullick farm, NW of Section 30, same township, and 5 miles north of Greenville, struck a dose of salt water at a depth of 1,013 feet and was abandoned as a dry hole.

In Crawford County, Prairie Township, Dill and others' test, 900 feet from the north line and 250 from the east line of the Herbert Brown farm, in the SW Section 6, was dry at a depth of 1,250 feet. Water broke in on the Ohio Oil Co.'s No. 4 on the John D. Waggoner farm in the SW Section 24, Southwest Township, same county, and the well has been abandoned.

In Wabash County, J. W. Whiteside Co.'s No. 5 well, 600 feet from the north line and 900 feet from the west line of the Howard Armstrong farm, in the SW of Section 24, Wabash Township, was dry at 1,540 feet. Same company's Nos. 1 and 3 on the Armstrong farm were abandoned.

In Lawrence County, Bridgeport Township, the Ohio Oil Co. abandoned Nos. 5 and 6 on the Aletha Griggs No. 1 farm, in the NE, Section 18. They were Kirkwood sand producers.

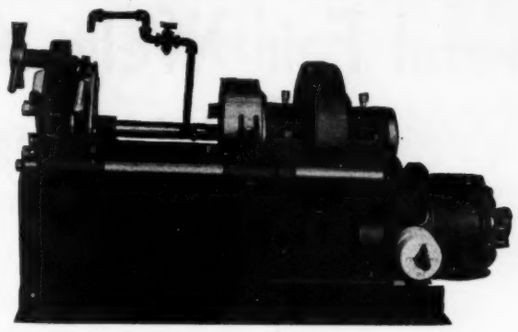
The same company abandoned Nos. 1 and 5 on the H. D. Rigall No. 2 farm, NW of Section 35, Petty Township, same county, on account of water breaking in. The same thing happened in the company's No. 8 on the J. W. Roderick farm, SE NE Section 26, same section. Big Four Oil & Gas Co. abandoned No. 14 on the E. J. Seed farm, SE Section 16, Lawrence Township, same county, which was a Kirkwood sand well.

KENTUCKY

Completions were few in the Western Kentucky Field, there being only four new wells reported, but all were commercial producers. In Ohio County the B. & B. Oil Co.'s No. 6 on the James Greer farm, in the Whittaker Pool, is estimated at 25 bbls. initial.

In Daviess County, James C. Ellis and others' second test on the Austin Ramsey farm, a mile northwest of Whitesville, produced an initial of 20 bbls. Johnson Oil & Refining Co.'s well on the B. S. Jenkins estate in the Habit Pool is reported with an initial of around 60 bbls. Brenner and Adams' No. 10 Albert Jackson farm, in the Cane Run Field, is estimated at 20 bbls.

W. K. White & Son are due for a wildcat completion on the H. Bivins farm, 1½ miles northeast of the Jett Pool, in Hancock County, on a 500-acre block of leases and are also nearing completions in a test on an unknown farm about 1½ miles south of Fordsville, in Ohio County. Should this area prove productive, a large number of wells will no doubt be drilled, as Mr. White has drilled more than a hundred wells in the State in past years when he was a large operator in the Estill County Field in the eastern part of the State. Mr. White was an old-time operator in the old Lima Field of Northwestern Ohio, and is now a resident of Hollywood, Calif. Some three weeks ago or so he started the two Kentucky wells, but met with an accident, a fall breaking his right wrist and damaging his right leg. He has since been in Toledo, Ohio, for treatment and will remain there until his tests are completed.



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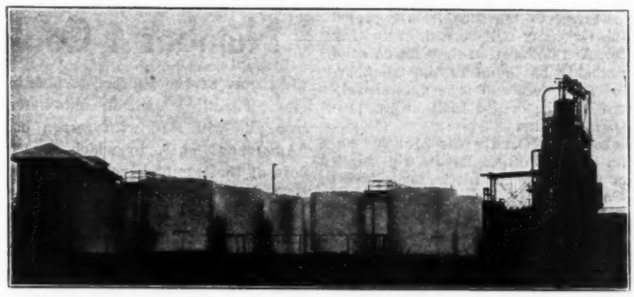

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Several Fair Wells Are Completed in the East; West Virginia Has One of 80 Barrels Initial

By STAFF CORRESPONDENT

PITTSBURGH, Pa., Oct. 17.—Although the number of completions was small during the week in the lower eastern fields, several fair wells were completed. The total was eight gas wells and one producer, making an initial flow of 80 bbls. a day, which is the best oil well brought in in West Virgina since curtailment and low prices discouraged drilling in oil areas.

SOUTHEAST OHIO

Two gas wells was all that Southeast Ohio added to the totals during the week and with but 27 wells drilling in this section of the eastern fields, the number of completions will continue small. The drilling operations cover the entire area and are not confined to a small section, although Washington County probably leads in activity.

The best gas well completed in the East was the test of the Hopewell Oil & Gas Co. on the Bert Middleton farm in Section 10, Brush Creek Township, Muskingum County. It is a Clinton sand gasser and is estimated good for 4,500,000 feet a day. The other gas well was the test of the Robinson Brothers on the Ora Lunch farm, Lot 13, Lee Township, Athens County. It is producing from a stray sand and is rated as a small gas well.

Drilling in Ohio

The deep test on E. E. Grimm and Benedum & Trees on the E. E. Knowlton farm in Section 10, Independence Township, Washington County, is drilling in the Niagara lime. Drilling was resumed at 5,490 feet with new rig and the depth is now 5,598 feet. The top of the Niagara lime was found at 5,467 feet and is so far a rather hard and tight formation with no showing of oil or gas. With the tools 131 feet in the lime it is expected that the Oriskany will be met in another 150 feet. At this location the Clinton sand will probably be found in the neighborhood of 7,1'0 feet and it is not unlikely this test will be drilled to it unless production intervenes.

In Coshocton County the Murphy Petroleum Co. and others have a rig standing on the Ward A. Little farm of 40 acres in Section 17, Perry Township. In the same township, the Preston Oil Co. is drilling at 400 feet in a second test on the F. H. Donaker farm, Section 17. In Pike Township, W. E. Stephenson has No. 3 drilling on the M. L. Noland farm in Section 20. It has reached 2,800 feet. The test of the Upham Oil & Gas Co. on the D. S. Snyder farm in Newcastle Township is still being swabbed and is making about 35 bbls. a day.

In Licking County, two wells are drilling. In Section 17, Fallsbury Township, Upham and Perkens are drilling on the C. M. Babcock farm. In Perry Township McClay Brothers have a well drilling on the Emmett and Olive M. Hoover farm in Section 3. It is 800 feet deep. In Section 7, Hanover Township, the Edward H. Everett Co. has a rig standing on the Felix Claypool lease No. 2.

In Muskingum County the Ohio Fuel Gas Co. has rigs up for Nos. 3 and 4 on the Ida B. Staker farm in Brush Creek Township, and Section 10, which has become of interest since the fair gas well on the Middleton farm. In Perry Township, the Atha Oil Co. has reached 2,000 feet in No. 5 on the T. M. Bryan farm, Section 11.

In Perry County the Huntington National Bank has No. 27 drilling on the Rodger Brothers lease in Section 22, Monroe Township. In Coal Township the Kachelmacher estate has rigged up for No. 6 on the Hemlock Coal Co. tract in Section 23.

In Guernsey County E. C. Quillan and others are drilling on the E. E. Hamilton farm in Section 10, Wheeling Township and the depth is now past the 1,400-foot level. In Knox County, M. J. Bonnett is drilling on the William Engle farm. Section 30, Howard Township. It is 300 feet deep. In Columbiana County, Frank Bosco is 4'0 feet deep on his own property in St. Clair Township.

WEST VIRGINIA

Six gas wells and one producer were completed in West Virginia during the week. Drilling activity of late has not included much in the oil areas but the producer was a necessary offset well in Sheridan district, Calhoun County. There on the waters of Three Mile Creek, the South Penn Oil Co. completed No. 3 on the Henry Grogg farm in the Salt sand at about 2,000 feet and has a producer which started to flow at the rate of 80 bbls. a day. In drilling this well, the Gas sand was struck which tested for over 400,000 feet a day. It was cased off. The well is rated at about 35 bbls. a day, judging from the action of the well across the line on a neighboring lease.

Gas Wells

Cabell County, now a center of activity, had two completions. In Guyandotte district, C. C. Wolfe completed a test on the C. H. Freeman farm in the Berea sand at a depth of 2,892 feet. It is rated over 400,000 feet a day. In the same district, the same operator completed No. 4 on the Ben Lomond Land Co. tract at a depth of 2,983 feet. It is a fair gasser showing for over 300,000 feet a day.

In Boone County the Cambridge Gas Co. completed its No. 3 on the C. C. Lewis heirs farm in Scott district. It is a gas well rated close to 250,000 feet a day from a depth of 2,574 feet. In Lincoln County C. McGhee and others completed their test on the A. L. Mullens farm in Jefferson district. It is good for about 300,000 feet a day from the formation at 2,176 feet.

In Marion County, Victor Tennant completed his second test on the Mary A. Moore farm in Paw Paw district. It was drilled in the Injun sand at a depth of 2,030 feet and is rated as a fair well showing for 500,000 feet a day. In Lincoln district, J. J. Allen drilled his old test on the J. N. Ashcraft farm deeper to 3,056 feet and has a gas well from that formation.

Drilling in West Virginia

In Roane County C. C. Cleavenger and others have a rig standing for a second test on the O. S. and Mary Taylor farm in Geary district. In Curtis district, the Big Four Drilling Co. has reached 2,050 feet on the H. C. Cottle farm. In Jackson County H. H. Sheppard and others are spudding in for another test on the T. C. Burdette farm in Washington district. The first test was not completed due to losing the tools in the hole.

Calhoun County of late has been less active. In Center district, W. Bickerstaff and others are drilling a second test on the John W. Haddox farm and have reached 2,015 feet, about on top of the Injun sand. In Sherman district, W. S. Dooley and others have shut down at 1,639 feet in drilling their old No. 1 on the G. T. Stump farm down to the Injun sand and are waiting on water.

In Wirt County Grover Whitecotton has spudded in and started drilling on the Cecil Jackson farm in Clay district. In the same district, M. H. Burke has made a location on the John L. Showalter farm, and Donald Nutter has cleared a location on the William Hull farm, same district. In this district, Samuel Brian is fishing at 600 feet on the D. P. Higgins farm. The Rock Run Oil Co. is likewise having trouble with a fishing job on the J. H. Leep farm, Clay district, at a depth of 1,800 feet.

In Kanawha County, Grosscup and others, successors to the Coopers Creek Oil & Gas Co., are drilling No. 3 on the Grant Copenhaven farm, now J. L. Dickinson, deeper and have reached 1,965 feet. This is in Elk district. In Union district, Ellyson and Wilson have reached a depth of 4,755 feet on the Virgil C. Tate farm. In Boone County, the Pure Oil Co. is cutting casing at a depth of 2,176 feet in No. 58 on the Federal Coal Co. tract in Sherman district.

New work started includes the test of R. H. Adkins and others on the M. and A. Williams farm in McComas district, Cabell County, which is now drilling. In Washington district, Lincoln County, the Harvard Gas Co. is moving in the tools for No. 3 on the Standard Fuel Gas Co.'s tract.

SOUTHWEST PENNSYLVANIA

No reports of completions were had in Southwest Pennsylvania during the week. A fair amount of drilling is being done and several are rigs standing. In Allegheny County, the Reilley Oil Co. has reached 1,790 feet on the Reilley heirs farm in South Franklin Township. In Alleppo Township, the Parks Oil Co. is past the 1,00-foot level in its second test on the J. D. Burg farm.

In Washington County, Raymond Orrill & Co. have made fair progress in their second test on the Mary Hazlett farm in Amwell Township and have reached 2,300 feet. In Mount Pleasant Township, Campbell & Co. are down 900 feet on the J. S. Campbell farm. In Hanover Township, Goldie Rendall & Co. have started drilling on the N. N. Arnold farm, and Reed & Co. are down 630 feet on the W. C. Arnold farm.

In Butler County Hudson Brothers have started a test on the Hartley Smith farm in Hancock Township and are now drilling at 370 feet.

In Greene County the Duquesne Gas Co. is past the 2,600-foot level on the G. W. and W. H. Scott farm in Center Township. In Springhill Township James H. Null and others are shut down at 300 feet in a second test on the Elizabeth Rice farm.

Wildcats

In West Virginia, Benedum & Trees have been held up with motor trouble in their test on the Pocahontas Coal Co. tract in McDowell County. The depth is still 5,325 feet and as soon as repairs are made drilling will be resumed.

In Virginia the Benedum & Trees test on the Clinchfield Coal Co. property in Russell County has reached 2,530 feet. In Wise County their test on the I. Kaufman farm is down 2,200 feet. There are no other changes in this district.

Simon Spellacy in Tool-Dressing Lesson Number 1 Couldn't Even Hit the Bit

Friends of the Spellacys—Martin, Simon, Timothy, Michael and Peter, oil men all—will read with zest a booklet, "Amateur Night", to which four members of the family have contributed, and then will go back and read again Simon Spellacy's reminiscences of early days in the Pennsylvania oil fields. The other contributions making up the volume are "Mickey Speaks His Piece", which is a parody on "Wearing o' the Green," by Michael A. Spellacy; "We Should Remember", a criticism of the League of Nations as now constituted, by Timothy Spellacy; "An Evening at Ye Olden Club", rollicking verses by S. K. Spellacy, Simon's son, and "Just a Word From Clare", which is in fact a letter from the parish clerk of Kilrush, County Clare, Ireland, relative to the birth date of John Spellacy, father of the Spellacy brothers. The booklet is copyrighted by S. K. Spellacy.

The family is well known in the oil industry, more especially perhaps among the older generation of operators. Michael Spellacy conducted extensive oil explorations in Colombia, South America, and organized the Motilones Oil Co. of Lima, Ohio, which has large applications for undeveloped property in Colombia. Simon is vice president of the company and S. K. is secretary-treasurer. All have oil interests in this country.

In his reminiscences Simon tells how he wormed his way into a job as tool dresser against the advice of his older brother Martin. When Martin, himself a driller in the Butler County oil fields of Pennsylvania, became convinced that he could not dissuade Simon, he told the latter to report for Lesson No. 1 to Deville Dart, Martin's drilling companion. Here is the way Simon tells it:

"In this, my first lesson, the bit was finally ready for the anvil and it was now up to me to make good with the sledge. There were several onlookers in the derrick at the time, among them my brother Martin. He always claimed that the position I took was like a country boy at a baseball game with his bat in the air ready to strike. He said that my left foot was raised upon the toe of my shoe, and while the expression upon my face was that of determination he felt satisfied that I did not know whether I was going to hit the block or the bit. I was told that the driller was to make the first stroke and then I was to follow up alternately until the bit was ready for polishing up. The driller made the start. Being a good husky fellow, the sparks of steel responded to his stroke. I felt that I would have to follow up with a good stroke like his, but instead of hitting the beveled part of the bit, I hit it full force right on the dull edge. Well, the stroke did not bring any applause from the audience. The old driller said to me: 'Be a little more careful this time.' But my next stroke was not quite as good as the first. Instead of hitting the bit I shot too low and landed with full force upon the wooden block."

That finished the first lesson, but Simon did not give up. There was a big stump near the derrick. With a piece of charcoal he marked a circle on it about the size of two fists, and he practiced pounding at that circle for a week till he was ready to try hitting at a bit again. He did better after that.

California Upset By Action at Kettleman Hills; Advisability of Taking Flow Test Debated

By L. P. STOCKMAN
Staff Correspondent, California Fields

LOS ANGELES, Calif., Oct. 15.—California seems to be facing another of those periodic crises which have arisen every now and then in connection with curtailment or marketing practices and, while the situation has not yet reached the critical stage, something must be done in the near future. The marketing situation is in fairly good shape and refiners are going into the winter with a better price structure. Whether it can be maintained in the face of lower consumption is another matter. The principal problem confronting California operators right now is the necessity of reducing crude oil production to economic requirements. Unless something is done to effect the necessary additional curtailment we may anticipate some disciplinary action in the way of price reduction, possibly after the forthcoming national election.

The action of Kettleman Hills operators in refusing to accept the new allotment prescribed for this field by the Executive Committee for Equitable Curtailment is of particular importance in view of the possible impending crisis. The Union, Petroleum Securities and Superior have reduced their production to the new allowable, which amounts to an additional reduction of 10 per cent, but directors of the Kettleman North Dome Association vetoed the proposal to effect any further reduction. In accordance with the association's by-laws, no action along this line can be taken without the unanimous consent and approval of all directors. It so happens that while most of the directors were in favor of the proposed additional curtailment there was no unanimity of opinion, with the result that the association is on record as opposed to any additional curtailment at least for the present. The objection to reducing Kenda's production is attributed to the fact that some members believe that Kettleman Hills is bearing more than its fair share of curtailment and also that operators holding productive acreage outside of the unit plan are not entitled to their present allotment. Directors of the association are of the opinion that all production in the North Dome should be allocated on an acreage basis and not predicated on the ability of any operator to show an excessive potential. In the meantime the Union, Petroleum Securities and Superior are curtailing production to the new allowable but do not be surprised if they open up again if Kenda continues to produce on the old basis.

Flow Test Problem

The Executive Committee for Equitable Curtailment, consisting of William Keck, Ralph B. Lloyd, William Geis, John B. Elliott, R. R. Bush, R. A. Broomfield, V. R. G. Wilbur, P. H. Greer, H. P. Grimm and H. F. Owen, appears to have inadvertently thrown a monkeywrench into the machinery by ordering flow tests to be conducted in the Playa Del Rey, Santa Fe Springs, Long Beach and Huntington Beach Fields. Just before ordering these flow tests, the executive committee conducted an economic survey to determine the demand for October, November and December. This survey revealed an indicated demand for crude oil of 440,000 bbls. per day and the committee adopted this report and ordered state production curtailed to the prescribed quota. Those in close touch with the situation are wondering how state production can possibly be reduced to the allowable as long as flow tests are being conducted. As a matter of fact, crude oil production instead of being reduced to the prescribed allowable of 440,000 bbls. has been averaging approximately 470,000 bbls. per day during the current month to date. The flow test for Santa Fe Springs, which started October 13, is scheduled to end October 23. The test at Long Beach starts November 1 and should be concluded about November 11, although it may run over for a few days longer, depending upon the smoothness with which this survey is conducted. After Long Beach and Santa Fe Springs are out of the way, operators in the Huntington Beach Field wil make their flow test to re-establish potentials.

If, as recommended, operators in the fields being given flow tests eliminate excess production accumulated during the flow period by underproducing a like amount, the situation will be corrected, but it is safe to assume that it will require coercion to accomplish this objective in some cases. Apparently operators have forgot the specific statement of President Kingsbury of the Standard last June that the price schedules would be withdrawn if production continued in excess of current requirements. Major companies are anxious to maintain existing prices but are at the same time reluctant to continue aggressive accumulation of stocks. It is significant to note that the Union Oil Co. in its earning statement for the third quarter continued to carry inventories of crude and refined oils at the prices prevailing January 1, 1932, which were substantially lower than existing quotations. In one way this conservative policy can be interpreted as revealing some dubiousness over the possibility of maintaining existing prices.

Santa Fe Springs Test

The second of four flow tests involving a like number of California fields got under way at 7 o'clock Thursday morning, October 13, when operators in the Santa Fe Springs Field cracked open their respective wells for a 10-day flow test to re-establish new potentials. Up until a week or so ago, major operators at Santa Fe Springs debated the advisability of opening up all wells due to the cost involved, but at the last moment decided to open up as many potential producers as possible. As a result of this decision, reached about a week or so ago, field men have been working practically night and day to complete the task which confronted them. Expenditures of the Union, General Petroleum, Shell, Standard and The Texas Company for new equipment necessary to conduct the flow test, averaged approximately $25,000 each. Upon the resumption of production activities, 75 of the 181 wells which have been shut in for over a year were placed on production and an additional 25 are expected to go on production within a day or so. Due to lack of equipment and the relatively short period allowed for recompletion, approximately 85 potential producing wells will be unable to make the flow test at Santa Fe Springs.

Previous to the production test now under way in the Santa Fe Springs Field, the Union Oil Co. and General Petroleum each had 41 wells shut in because of curtailment. In addition to these wells, many of which have been shut in for more than a year, the Standard had 30 wells shut in, The Texas Company 24 wells, Shell 23, Associated 10 and the remaining 10 scattered among other operators. Many of these wells, which have been shut in for a year or so because of curtailment, were practically devoid of production equipment up until a few days ago as little by little the original equipment was moved to othe areas. As a result, many of these potential producers at Santa Fe Springs were reduced to skeleton form and consequently necessitated the purchase of new equipment. In several cases, operators did not feel justified in making purchases of new equipment for such a short period, especially as many of the wells will have to be shut in again upon completion of the flow test.

The flow test in the Playa Del Rey Field was concluded with the 7 a.m. gauge October 11 and, while the field failed to equal its rated potential, it nevertheless made a creditable showing. This field was given a rated potential of 17,520 bbls. and established a potential of approximately 16,000 bbls. The flow test at Playa Del Rey definitely confirmed the opinion of many well informed oil men that curtailment of production in the Playa Del Rey Field was a negligible factor. This is especially true when one considers the fact that only a few operators equaled or exceeded their established potentials. Santa Fe Springs and Long Beach are not generally expected to attain their present potentials, although several operators in each of these fields will in all probability approach their respective potentials.

The flow test at Playa Del Rey was the lesser of the four tests to be made and, while that involving Santa Fe Springs will be somewhat more difficult, the umpire's staff will be taxed to the utmost when the Long Beach Field is turned loose as the large number of wells and numerous diversified interests in this congested area make it extremely difficult to gauge all wells at a given time. Neither Long Beach, Santa Fe Springs nor Huntington Beach are expected to reach their rated potentials but upon the conclusion of the production tests in these four critical fields, the Executive Committee for Equitable Curtailment will be in a position to discuss intelligently curtailment with operators in all of the fields. These tests will definitely indicate which operators are curtailing and which are shifting their moral obligation. So far, the Union Oil Co. is batting 100 per cent and the company's field department confidently expects to exceed its rated potential at Santa Fe Springs. The Union greatly exceeded its potential at Playa Del Rey and, holding the cream of the acreage at Santa Fe Springs, should likewise show up rather favorably in that area. The General Petroleum is also expected to make a good showing at Santa Fe Springs as both the General Petroleum and Union repressured the upper zones with surplus gas from the lower horizons when others were blowing it into the air and in addition, have had a number of inside wells shut in for a long time. At Long Beach, where it is employing about 200 men to recondition wells for the impending flow test, the Shell should show up rather well as it has had a number of potential producers shut in for more than a year. A similar situation exists with respect to the Standard Oil Co. at Huntington Beach where many inner-line wells have been curtailed for a long time.

Fruitvale

As the result of the failure of Playa Del Rey to reach its rated potential, the Executive Committee for Equitable Curtailment is expected to entertain a proposal for a flow test in several other California fields in the near future. If this proposal meets with the approval of the executive committee it is likely a flow test will be conducted in the Fruitvale Field as the smaller initials registered by recent completions tends to indicate the possibility that the rated potential of this field, 13,000 bbls. per day, is somewhat in excess of the field's maximum open flow. The only logical criticism which can be directed against the re-establishment of potentials by unrestricted production tests is that this procedure stimulates production and thus nullifies attempts to secure effective cur-

TANKER SHIPMENTS FROM LOS ANGELES TO DOMESTIC AND FOREIGN PORTS

	Oct. 1, 1932		Sept. 24, 1932			
Intercoastal-domestic—	Total this week	Daily average	Total last week	Daily average	This year to date	Same time last year
Diesel and gas oil	74,325	10,618	.....	.. ..	608.445	1.379.888
Gasoline	....	.....	480,075	68,582	6,442,235	10,791,558
Kerosene	....	.....	.....	.....	154,372	187,934
Foreign exports—						
Crude oil	155,366	22,195	62,221	8,889	6,320,130	5,787,947
Fuel oil	149,615	21,374	209,494	29,928	6,522,367	10.435,334
Diesel and gas oil	28,937	4,139	29,528	4,218	1,854,030	2,845,892
Gasoline	36,595	5,228	198,985	28,426	6,374,852	6,823,116
Kerosene	154,134	22,019	10,565	1,509	2,226,848	1,321,179
Lubricants	....	.....	.....	.....	....	36,353
Naphtha distillates	....	.....	.....	.....	120.075	.....
Coastwise-domestic—						
Crude oil	506,608	72,373	192,095	27,442	11,138,646	17,168,392
Fuel oil	244,858	34,980	196,779	28,111	9,019,341	9.993,039
Diesel and gas oil	11,822	1,689	28,200	4,029	979,284	1,158,315
Gasoline	266,550	38,079	157,832	22,547	11,564,366	10,707,654
Kerosene	....	....	.....	.....	132,093	240,413
Naphtha distillates	....	.....	.....	.....	.....	4,952

TANKER SHIPMENTS FROM SAN FRANCISCO TO DOMESTIC AND FOREIGN PORTS

Intercoastal-domestic—						
Diesel and gas oil	....	..	79,840	11,406	483,201	.....
Gasoline	....	.....	191,567	27,367	844,423	883,929
Kerosene	..	.....	.....	....	75,760	.....
Lubricants	....	...	.....	...	23,829	35,236
Foreign exports—						
Crude oil	....	..	....	..	707.651	249,081
Fuel oil	....	....	.....		798,098	1,285,726
Diesel and gas oil	....	....	.....	.....	519,332	435,298
Gasoline	137,414	19,631	70,115	10,016	2,879,314	3,450,174
Kerosene	....	.....	10,680	1,526	768,230	688,272
Lubricants	....	.....	.....	.....	30,094	25,693
Coastwise-domestic—						
Fuel oil	62,831	8,976	62,591	8,942	2,288,881	2,688,342
Diesel and gas oil	....	....	.....	.....	321,433	346.660
Gasoline	146,160	20,880	43,280	6,183	2,920,732	3,376.013
Kerosene	7,177	1,025	.....	....	91,723	250,541
Naphtha distillates	....	....	.....	....	.....	49,780

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tailment. Drilling operations have shown a consistent decline in the Fruitvale Field for several months and are expected to reach a lower level before the current year ends. The Emerich Oil Co. has been experiencing a little difficulty in completing No. 1 Greely in this field at 3,690 feet and, while the well flows by heads for a short time after being swabbed, it does not seem to have sufficient kick to result in a natural flow. No. 1 Bloemer of the Petrol has proven a dud upon completion at 4,040 feet as it has failed to yield commercial production. The Powell-Stockton Investment Co. has started rig construction for a new well to be drilled on the Baier lease in the Fruitvale Field and drilling operations are expected to get under way within 10 days. The rotary drilling equipment to be used is being salvaged from the company's No. 1 Courtner, a duster which the company drilled at Kettleman Hills. The Bankline Oil Co. has switched its Fruitvale wells from steam to electricity as an operating economy.

Buttonwillow

General Petroleum's No. 2 Morris, a recent spud in the Buttonwillow gas field of Kern County, got away from the crew during the past week and ran wild for several days. This well, which blew in out of control while drill pipe was being pulled, was estimated to be flowing at the rate of 20,000,000 feet of dry gas per day. Except for the possible fire hazard, this well did not present any unusual difficulties as the quantity of gas, while relatively large for Buttonwillow, is comparatively insignificant when compared with some of the 100,000,000-foot gassers which have got beyond control in Los Angeles Basin fields at Kettleman Hills. No oil has been found in the Buttonwillow gas field up to the present, although this district has potential possibilities which will be tested. The Milham Exploration Co., discoverer of the Buttonwillow gas field, has spudded in No. 2 Whitaker and should finish this project within three weeks. If climatic conditions are favorable, the Buttonwillow Field is expected to go on commercial gas production early in November.

Lost Hills-Belridge

Definite confirmation of a projected deep test for the Lost Hills Field of Kern County was evidenced this week by a budget appropriation of the Richfield Oil Co. sanctioned and approved by U. S. District Court Judge James. The Richfield's budget is divided into an allowance of $365,000 for the marketing department and $322,000 for the production department. The budget for the first department is made up of numerous small items requiring immediate attention, such as new pumps for service stations and an augmented fleet of delivery trucks. The appropriation for the production department is for the repair and reconditioning of old wells and rehabilitation of present producers. The production department appropriation also includes $200,000 for dry hole money to cover a one-half interest in a new projected deep test to be drilled by the Richfield and Associated Oil Co. in the Lost Hills Field. This deep test has been tentatively located in Section 2-26-20, which is approximately 1 mile northeast of No. 1 Theta, originally started by George F. Getty, Inc., and subsequently taken over and deepened by the Lincoln Drilling Co. This test will mean much to the Richfield if commercial production is developed as the company owns 400 acres in fee and has additional joint holdings with the Standard Oil Co. in the immediate area. Owning 50 per cent of the Universal Consolidated through stock holdings, the Richfield also has an interest in a 40-acre tract held by the Associated. The Texas Company, Standard, Pacific Western, Shell and Universal Consolidated are expected to contribute dry hole money, which affords a cheap

IMPORTANT SOUTHERN CALIFORNIA WILDCATS

Company, farm and location—	S.T.R.	Depth	Status:
Hines Pet., No. 1 Ocean Park, Los Angeles Co.	9- 2-15	7,414	cleaning out
Taylor Oil Co., No. 1 Culver, Los Angeles Co.	12- 2-15	6,238	suspended
Co-operative Dev. Co., No. 1 Del Rey, Los Angeles Co.	26- 2-15	5,302	sd. sh. drilling
Del Rey Hills Corp., No. 1 Del Rey, Los Angeles Co.	26- 2-15	mtl.	building rig
Palm Ridge Oil Co., No. 1 Palms, Los Angeles Co.	2- 2-15	1,677	sd. sh. drilling
Lawndale Pioneers, Inc., No. 1 Peck, Los Angeles Co.	30- 3-14	6,378	suspended
Baldwin Oil Co., No. 9 Inglewood, Los Angeles Co.	7- 2-14	5,696	cemented
Baldwin Hills Synd., No. 1 Inglewood, Los Angeles Co.	17- 2-14	4,090	suspended
Kyle, W. A., No. 1 Inglewood, Los Angeles Co.	7- 2-14	4,000	test W. S. O
El Dorado Oil Co., No. 1 Puente, Los Angeles Co.	30- 2- 9	2,860	suspended
Durgin & Allen, No. 1 Spadra, Los Angeles Co.	33- 1- 9	1,609	abandoned
Jones, W. L., No. 1 Bell, Los Angeles Co.	31- 2-12	3,372	sd. sh. drilling
Blinn & Gray, No. 1 Montebello, Los Angeles Co.	6- 2-11	5,060	suspended
McNeil, A. W., No. 1 Montebello, Los Angeles Co.	7- 2-11	rig	suspended
Hutchinson & Andrus, No. 1 El Monte, Los Angeles Co.	11- 1-11	rig	rigging up
Yellowstone Oil Co., No. 1 Alhambra, Los Angeles Co.	24- 1-13	3,919	suspended
Smith, J. H., No. 1 Hasley, Los Angeles Co.	32- 5-17	3,212	suspended
Superba Pet., No. 1 Newhall, Los Angeles Co.	11- 3-16	214	sd. drilling
Sanbar Pet. Co., No. 1 Newhall, Los Angeles Co.	35- 5-16	660	sd. sh. drilling
Ball, W. T., No. 1 Newhall, Los Angeles Co.	34- 3-16	3,399	suspended
Security Dev. Co., No. 1 Newhall, Los Angeles Co.	31- 5-14	171	sd. sh. drilling
Ajax Pet., No. 1 Newport, Orange Co.	21- 6-10	7,259	suspended
Nuoil Co., No. 1 Newport, Orange Co.	29- 6-10	1,970	suspended
Mineral Expl., No. 1 Capistrano, Orange Co.	8- 8- 7	3,790	sd. sh. drilling
Orangethorpe Pet., No. 1 Brea, Orange Co.	32- 3-10	4,560	suspended
Spindletop Oil Co., No. 1 Salton Sea, Riverside Co.	25- 7-10	3,590	suspended
Duncan, N. L., No. 1 Sagebrush, Riverside Co.	8- 4- 6	1,157	suspended
Colan Dev. Co., No. 1 Redlands, San Bernardino Co.	25- 1- 2	2,392	suspended
Great American Pet., No. 1 Chino, San Bernardino Co.	18- 2- 8	mtl.	building rig
Mason Oil Co., No. 1 Salton Sea, Imperial Co.	7-17-15	630	sd. sh. drilling
Woods, D. H., No. 1 Salton Sea, Imperial Co.	7-11-16	774	sd. sh. drilling
San Felipe Oil Co., No. 1 Borega, San Diego Co.	25-11- 8	mtl.	building rig
South Bay Oil Co., No. 1 Border, San Diego Co.	31-18- 2	1,243	suspended

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method of proving up deep zone possibilities by the drilling of one joint test. There have been several deep tests drilled in the Lost Hills Field since the discovery of Temblor production in the North Belridge Field of Kern County but none showed commercial production. Most of these tests were rather unfavorably located with respect to structure. The new projected test to be drilled at Lost Hills will be drilled by the Associated Oil Co., which will have the assistance and collaboration of the technical departments of other companies involved. The outcome of work on this well will be of special interest as it may prove Temblor or Eocene production in this field. Lost Hills is in a direct line between Kettleman Hills and Belridge and should have normal geological conditions. This field is several times larger than North Belridge and consequently will become a factor of prime importance if deeper production is discovered. In the North Belridge Field, the Ohio Oil Co. is nearing the 7,000-foot level in No. 1 Bloemer, a deep test to determine the potentiality of this lease before quitclaiming it. The Continental Oil Co.'s No. 3 Result has another 1,000 feet to go before completion but the company has been making good footage and should finish it before the close of the year. In the Devils Den area, lying between Kettleman Hills and Lost Hills and a little to the west, Tom Hannah is cleaning out his well No. 1 preparatory to making a production test. A. S. Halloway failed to secure a satisfactory water shutoff on the 10¾-inch casing landed in No. 1 Lincoln at 668 feet and the hole has been recemented.

Kettleman Hills

Kettleman Hills, which has been looked upon as a model of efficiency and a strict observer of curtailment, has been temporarily dethroned from its pinnacle because of the refusal of the Kettleman North Dome Association to effect the additional curtailment required by the curtailment committee. It might be well to remember that Kettleman Hills has adhered to a pegged allowable of 60,000 bbls. per day despite the fact it has a potential daily production of 275,000 bbls. In most other fields of the State the allowable daily production is predicated on the ability of the field to produce. In the case of Kettleman Hills, the field has been assigned a definite pegged allowable, irrespective of its potential. Kettleman Hills operators, in refusing to accept the new allotment, have in effect served notice on operators in other fields that they must strictly observe curtailment or take the consequences. In other words, Ketleman Hills operators propose to assert their dominant position with respect to production. The Standard has spudded in No. 41-29 J, a new well in the North Dome, and will probably start drilling operations on two additional projects within 30 days. The Kettleman North Dome Association has started rig construction for well No. 87-30 J, to be drilled in Section 30-21-17. The North Kettleman Oil & Gas Co. cored the second variegated shale in No. 1 Lillis-Welsh in the North Dome at 9,011 feet, but the present formation, a coarse gray sand at 9,080 feet, failed to react favorably when given an ether and acetone test. The Associated Oil Co., which has three completed wells in the North Dome, is endeavoring to obtain an extension of time on its Whepley lease, as lease obligations require the company to start a fourth well within the next three or four weeks. Lease requirements on this property call for the drilling of a new well within 90 days after the last previous completion. The Petroleum Securities, in returning to the North Dome and resuming work in No. 3 Felix which offsets the Associated's Whepley lease, may prevent the Associated from securing the drilling moratorium to which it is entitled.

Long Beach

The Bartholomae Oil Co. recompleted its No. 1 in the Long Beach Field of Los Angeles Basin a few days ago but the initial production, 64 bbls. of 27.1 gravity oil per day hardly justifies the expenditure required to put this well back on the beam. The Texas Company recompleted No. 1 Daly Gerard after cleaning out the hole to bottom, 5,484 feet, and returned it to production pumping 65 bbls. of relatively clean 26.6 gravity oil per day. The M. & A. Oil Co.'s No. 1 Master & Daniels, a producing well in the Long Beach Field, caught fire early in the week and will consequently require additional pumping equipment before the flow test starts in this field on November 1. The fire on this rig resulted from an explosion of gas, which apparently was concentrated in the cellar of the well, and resulted in the destruction of equipment and loss of the wooden derrick.

The Huntington Beach Field was also visited by a fire during the week which destroyed two wooden derricks, two 750-bbl. storage tanks and pumping equipment. This fire was started when a lease tank overflowed permitting the oil to run down to a boiler on an adjoining lease. The two wells temporarily disabled by this fire, which lasted for approximately two hours, belonged to Speik Oil Co. The fire was ultimately brought under control by men and equipment of the Standard, Superior and Wilshire Oil Companies. L. H. Bennigsdorf, superintendent of the Speik Oil Co., was thrown 30 feet from the top of one of the tanks which exploded following ignition of the oil. W. E. McCaslin is still attempting to complete No. 1 Hanks in the Huntington Beach Field as a commercial producer but is not experiencing any great amount of success. This hole, plugged back from 5,228 feet to 5,050 feet, has been suspended but may be worked over again if the 4¾-inch liner which froze at 5,038 feet can be loosened.

The Associated and Gilmore are abandoning a number of old producing wells in the Salt Lake Field of Los Angeles Basin and several additional wells are expected to be abandoned shortly. The Associated recently removed its salvage yard on Fairfax Avenue and is cleaning out the old sump holes and removing a number of old tanks. The Gilmore Oil Co. has partially dismantled its topping plant on Gardner Street and has a crew of men dismantling the old wooden derricks. Property in this area, due to the depleted condition of the oil zones in the Salt Lake Field, has become valuable during the past several years for residential purposes.

Ventura Avenue

The Associated Oil Co., which has established several records in the Ventura Avenue Field from a mechanical standpoint, recently landed 7,024 feet of 11¾-inch casing in No. 131 Lloyd preparatory to carrying this well to the deep 57 zone. The previous record chalked up by the Associated consisted of landing a long string of 9-inch casing which was floated in without any difficulty. The company is running four strings of tools in this field and will probably continue to show restricted development. The General Petroleum and Shell have reduced drilling operations in this field to one well each and are expected to confine future drilling operations to the present level until spring. The Indian Petroleum Co. is driving piles and building an isolated pier to facilitate drilling operations on a new well to be drilled on tideland permit No. 55 in the Rincon Field. The General Petroleum is swabbing Neil Needham's well No. 2 on tideland permit No. 55 for production in an effort to bring the well back on production. This project, bottomed at 7,334 feet, has been somewhat of a disappointment due to the failure to sustain steady commercial production. The Bolsa Chica Oil Co. is making preparations to perforate the casing in its Coal Oil Point wildcat between 4,031-46 feet following the failure of the previous test to show commercial production. In the Inglewood Field of Los Angeles Basin, the Baldwin Oil Co. has cemented a string of 6⅝-inch in No. 9 Brownmoor at 5,535 feet following the coring of approximately 50 feet of fairly good looking oil sand. The production test will probably be made on this well during the coming week.

NEW PHILADELPHIA RATE

PHILADELPHIA, Pa., Oct. 17.—Mayor Moore has approved reduction in gas rate to 90 cents per 1,000 for the first 2,000 feet and 85 cents for each additional 1,000.

IMPORTANT NORTHERN CALIFORNIA WILDCATS

Company, well and location—	S.T.R.	Depth	Status:
Standard, No. 1 Santa Rosa Island, Santa Barbara Co.	unsurveyed	3,733	cemented
Field Gasoline Co., No. 1 Lompoc, Santa Barbara Co.	6- 7-33	2,552	test W. S. O.
Lee, W. M., No. 1 Lompoc, Santa Barbara Co.	28- 8-34	....	material
Superior Oil Co., No. 4 Santa Maria, Santa Barbara Co.	36-10-33	830	abandoned
Superior Oil Co., No. 5 Santa Maria, Santa Barbara Co.	36-10-33	220	core hole
Equity Oil Co., No. 1 Coal Oil Point, Santa Barbara Co.	24- 4-29	3,750	suspended
Bolsa Chica, No. 1 Coal Oil Point, Santa Barbara Co.	25- 4-29	4,031	testing
Deul et al, No. 1 Naples, Santa Barbara Co.	7- 4-29	5,134	suspended
Oakburn Oil Co., No. 1 Capitan, Santa Barbara Co.	tideland	2,821	plugging
Casitas Oil Co., No. 1 Carpinteria, Santa Barbara Co.	tideland	461	cemented
Cuyama Oil Co., No. 1 Cuyama, Santa Barbara Co.	12-10-27	1,010	suspended
Universal Consolidated, No. 1 Rincon, Ventura Co.	4- 3-24	5,073	sd. sh. drilling
Indian Pet., No. 1 Rincon, Ventura Co.	tideland	....	building pier
Sovereign Oil Co., No. 1 Fillmore, Ventura Co.	23- 4-19	....	material
Honolulu Consolidated, No. 1 Miguelito, Ventura Co.	23- 3-24	mtl.	building rig
Wilshire Oil Co., No. 1 Sulphur Mountain, Ventura Co.	20- 4-21	317	rig cable tools
Superior Oil Co., No. 1 Timber Canyon, Ventura Co.	13- 4-21	4,993	sd. sh. drilling
International Oil Developers, No. 1 Conejo, Ventura Co.	33- 2-20	2,100	hd. sd. drilling
Los Posas Pet. Co., No. 1 Los Posas, Ventura Co.	22- 3-20	....	material
Hay Pet., No. 1 Weed Patch, Kern Co.	22-30-29	....	location
General Pet., No. 2 Buttonwillow, Kern Co.	6-28-23	2,280	testing
Milham Expl., No. 19 Buttonwillow, Kern Co.	8-28-23	761	sd. sh. drilling
Purman, T. H., No. 1 McKittrick, Kern Co.	22-29-21	4,610	suspended
Welport Oil Co., No. 2 McKittrick, Kern Co.	19-29-21	640	repair rig
Ozena Oil Co., No. 2 McKittrick, Kern Co.	27-29-31	3,000	br. sh. drilling
General Pet., No. 1 Belridge, Kern Co.	30-28-21	8,260	suspended
Wallace, K. C., No. 1 Belridge, Kern Co.	32-29-21	4,222	suspended
Cumberland Oil Co., No. 2 Devils Den, Kern Co.	17-26-18	3,263	suspended
Hallaway, A. S., No. 1 Devils Den, Kern Co.	11-25-18	675	recemented
Hannah, Tom, No. 1 Devils Den, Kern Co.	25-25-18	3,516	reaming
Pyramid Hills Oil Co., No. 1 Devils Den, Kern Co.	24-25-18	1,724	suspended
Fowler, F., No. 1 Blackwell Corner, Kern Co.	15-26-19	3,170	suspended
Ritchie, J. J., No. 1 Tejon, Kern Co.	33-11-19	6,025	suspended
Descanso Oil Co., No. 1 Tejon, Kern Co.	31-11-19	2,749	suspended
Kingsburg Expl. Co., No. 1 Kingsburg, Fresno Co.	30-16-23	2,970	suspended
Kent & McDonald, No. 1 Carrizo Plains, San Luis Obispo	3-32-22	3,006	sd. sh. drilling
Emerich Oil, No. 1 Carrizo Plains, San Luis Obispo Co.	22-32-22	1,841	suspended
Trav-El Oil, No. 1 Carrizo Plains, San Luis Obispo Co.	7-32-22	2,450	suspended
Indian Dome Oil Co., No. 1 Edna, San Luis Obispo Co.	26-31-12	3,352	suspended
Paso Robles Oil Co., No. 1 Edna, San Luis Obispo Co	27-27-11	4,191	suspended
Schilling, C., No. 1 Atascadero, San Luis Obispo Co.	1-29-12	1,650	suspended
Shell, No. 1 San Miguel, San Luis Obispo Co.	4-25-12	2,593	sd. sh. drilling
Pacific Inland, well No. 1, Monterey Co.	19-23-15	2,441	suspended
Brown, W. F., No. 1 Parkfield, Monterey Co.	15-23-14	1,051	suspended
Thomas Pet. Co., No. 1 Parkfield, Monterey Co.	31-22-14	198	suspended
Guess, E. B., No. 1 Corcoran, Kings Co.	7-21-21	6,197	suspended
Woodward, Glen, No. 1 Dudley Ridge, Kings Co.	32-22-20	775	suspended
Scott Bros. Drlg. Co., No. 1 Dudley Ridge, Kings Co.	18-22-19	1,843	suspended
Kettleman Nat. Gas Co., No. 1 Dudley Ridge, Kings Co.	18-22-19	1,100	suspended
Irma Investment Co., No. 2 Dudley Ridge, Kings Co.	7-23-20	1,224	suspended
Triune Oil Co., No. 1 Dudley Ridge, Kings Co.	5-23-20	1,098	cleaning out
Dudley Dome Oil Co., No. 1 Dudley Ridge, Kings Co.	9-23-20	771	gr. sd. drilling
Eagle Oil Co., No. 2 Dudley Ridge, Kings Co.	15-23-20	1,342	suspended
Knudsen & Schmidt, No. 1 Reef Ridge, Kings Co.	36-23-17	5,812	cleaning out
Kettleman Ridge Oil Co., No. 1 Avenal, Kings Co.	10-23-16	1,148	suspended
Magee & Stone, No. 1 Alpaugh, Kings Co.	34-24-22	5,060	suspended
Western Resource Corp., No. 3 Dudley Ridge, Kings Co.	12-23-22	1,840	suspended
Ducor Pet. Co., No. 1 Ducor, Tulare Co.	14-24-27	2,200	suspended
Inland Valley Oil Co., No. 1 Visalia, Tulare Co.	24-17-24	2,092	suspended
Sheldon & Gholson, No. 1 Porterville, Tulare Co.	34-22-27	962	suspended
Hayman Oil Co., No. 1 Porterville, Tulare Co.	17-23-28	380	suspended
Ellis & Sanford, No. 1 Tulare Lake, Tulare Co.	20-24-23	1,490	suspended
Napa Oil Co., No. 1 Griffith, Napa Co.	7- 8- 3	3,238	sd. sh. drilling
Oakdale Oil Co., No. 1 Oakdale, Stanislaus Co.	5- 2-10	4,808	sd. sh. drilling
Hilderbrandt, R., No. 1 Crows Landing, Stanislaus Co.	36- 6- 7	1,130	suspended
Rushing Oil Co., No. 1 Waterford, Stanislaus Co.	20- 3-13	2,640	sd. sh. drilling
Pacific Northern Oil Co., No. 1 Guinda, Yolo Co.	23-12- 3	3,045	suspended
Bergman, Harry, No. 1 Dos Palos, Merced Co.	12-12-11	....	material
Los Banos Pet., No. 1 Los Banos, Merced Co.	26-10- 9	rig	suspended

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Royalty Order on Public Domain Is Suspended; Plan New Pipe Line Into McKinley County

By TOLBERT R. INGRAM
Staff Correspondent, Rocky Mountain Area

DENVER, Colo., Oct. 17. — Secretary of the Interior Wilbur has suspended temporarily the order recently issued requiring oil producers on the public domain to pay royalties on 100 per cent of the volume of oil recovered on government leases instead of the 97 and 98 per cent which has been the rule for many years. The order was to have gone into effect October 1. The Rocky Mountain Oil and Gas Association, the Mid-Continent Oil and Gas Association, the American Petroleum Institute and a number of operators requested an opportunity to be heard on the order before it was put into effect. It affects all production on government leases on which there are no oil purchase contracts in effect. Salt Creek and Cat Creek are excluded for the present on account of such contracts, but when these expire within the next three years the rule will prevail if finally adopted.

In New Mexico, Hobbs Pool allowable outlet remains at 25,000 bbls. daily. Two inside locations were made in the Hobbs Pool by the Amerada Petroleum Corp. and the Getty Oil Co. The Texas Company made a new location in the Lea area. Tidal Oil Co.'s No. 1 State in the Eunice area tested 524 bbls. the first 24 hours. An increase in drilling activity in McKinley County is reported due to plans to construct pipe line.

In Colorado the Rangely Dome deep well of the California Co. is swabbing down for a test and the Ramsey well in the northeastern part of the state is delayed in drilling in by boilers going out. One well was abandoned and another is starting in Washington County. A small gas well was completed in Las Animas County.

Wyoming had no completions. Ohio Oil Co. is starting a well on Dutton Creek and one new operation in Platte County was reported.

In Montana two Cut Bank wells near the sand have not yet drilled in. Adams-Bell Syndicate's test of South Pondera was abandoned.

NEW MEXICO

Lea County

The allowable outlet of the Hobbs Pool for the first half of October remains unchanged at 25,000 bbls. per day, the schedule for the last half of September being in effect for the period. Pipe line runs for September aggregated 742,483 bbls., bringing the total since proration went into effect up to 26,622,333 bbls.

Considerable excitement occurred in the town of Hobbs October 11 when Skelly Oil Co.'s No. 1 Turner, SE NW Section 34-18-38, located in the residence section, broke loose and blew oil over the town for an area of several blocks for about 30 minutes before it was brought under control. The control head blew off while the contractors were removing the rig. The well was completed recently for 1,944 bbls. of oil and 1,000,000 feet of gas.

Two more locations for inside wells in the Hobbs Pool were reported this week. Getty Oil Co.'s No. 5 McKinley, NE cor. Section 30-18-38, which was abandoned as a location two years ago, is digging cellar, and Amerada Petroleum Corp.'s No. 2 Boon Hardin, SE cor. SW Section 18-18-38, is digging cellar. The last named is along the most northerly tier of wells in the field and will call for three offsets. In this same area Skelly Oil Co.'s No. 1 McKinley, SW NW NW Section 20-18-38, is drilling at 3,860 feet in anhydrite. It bottomed the salt at 2,640 feet and topped brown lime at 2,930 feet. Humble Oil & Refining Co.'s No. 1-B Bowers, NW cor. Section 29-18-38, is bottomed at 2,750 feet and cemented the 9⅝-inch at 2,742 feet with 650 sacks. Shell Petroleum Corp.'s No. 3-B McKinley, SW cor. Section 20-18-38, cemented 9⅝-inch with 600 sacks at 2,800 feet.

In the southern part of the pool, Midwest Refining Co.'s No. 11 Byers, C NE NW Section 3-19-38, is redrilling at 1,020 feet after cementing back two or three times from 1,633 feet to straighten hole. Same company's No. 29 State, C SW NW Section 10-19-38, is spudding at 185 feet. Gypsy Oil Co.'s No. 2 East Grimes, C SE NE Section 33-18-38, cemented 9⅝-inch at 2,760 feet with 500 sacks.

In the Eunice area Tidal Oil Co.'s No. 1 State, C SW SE Section 8-21-36, joint with Devonian Oil Co. and Derby Petroleum Corp., which was shut in several weeks ago for testing, was completed this week at a total depth of 3,985 feet with an initial production of 524 bbls. in 24 hours, flowing open. It also made 750,000 feet of gas. It is now making 120 bbls. per day through a nine-sixty-fourths inch choke. It topped the pay at 3,950 feet.

In the Lea area a location was made for The Texas Company's No. 2-A Lynch, C SE SE Section 34-20-34, one-fourth of a mile southeast of its No. 1 Lynch, and to the northwest of its No. 3-A State, which recently was completed. Same company's No. 1-B Lynch, C SW NW Section 34-20-34, is drilling at 1,130 feet in the red beds.

In the Lovington area Western Drilling Co.'s No. 1 State, NE cor. SE Section 13-17-36, joint with Republic Producing Co., is drilling at 3,205 feet in the red beds. It bottomed the salt at 3,150 feet. It is drilling with cable tools.

Eddy County

Flynn, Welch & Yates' No. 63 State, SE cor. NW Section 10-19-28, Artesia area, after being shot with 135 quarts at 2,070-2,124 feet, cleaned itself. The stem and other junk is at the bottom of the hole and no gauge has yet been taken.

Thomas Flynn, a member of the above firm and a pioneer in the Artesia development, died the past week at his home in Robinson, Ill., at the age of 58. He suffered a stroke of paralysis 21 months ago and never recovered.

Leonard & Levers' No. 8 State, C SE Section 21-17-29, Jackson area, is drilling at 2,060 feet in lime. It topped the red sand at 1,710 feet.

R. Spearow and others' No. 1 McClelland, SW NW NE Section 22-22-23, west of Carlsbad, is drilling at 485 feet in lime.

In the Compton area, W. A. Scott's No. 1 Kaiser, NW SE Section 7-18-27, is drilling at 1,320 feet in gray lime, and Finley, Woods & Brainard's No. 5 Brainard, C NW SW Section 5-18-27, is drilling at 576 feet. The 12½-inch was set at 472 feet for a water shutoff.

Chaves County

R. D. Compton's No. 1 Emerson, SW cor. SE Section 20-10-24, near Roswell, is drilling at 1,088 feet in red sand topped at 992 feet.

Bernalillo County

Norrins Realty Co., Inc.'s No. 1 Gallegas grant, C NW NW Section 19-11n-4e, 12 miles northeast of Albuquerque, has rig completed, and its No. 1 Pajarito grant, NW cor. NE Section 22-9n-1e, southwest of Albuquerque, is ready to resume with cable tools after cementing the 8¼-inch at 3,356 feet.

DeBaca County

Landowners Oil Co.'s No. 1 State (McAdoo), SW cor. NE Section 16-1s-27, Buffalo Creek, is drilling at 5,145 feet in lime. It had a good show of gas at 5,114 feet and a show of oil at 5,126 feet.

Guadalupe County

New Mexico Exploration Co., Inc.'s No. 1 Anton Chico grant, NE cor. SW Section 20-9n-17, is drilling at 350 feet with cable tools in a 5,000-foot test. It spudded September 9.

Santa Fe County

Kelsey Clients Development Estate's No. 1, Section 26-10n-10e, Crow Butte district, is bottomed at 825 feet and preparing to run 10-inch to shut off water at 790 feet.

Valencia County

Western Natural Resources Corp., Inc.'s No. 2 San Clemente grant, SW cor. NE Section 5-6n-1e, De Chaves Dome, spudded October 3. E. B. Guess Drilling Co. has the contract for a 5,000-foot hole to the Pennsylvanian. The location is three-fourths of a mile north and a little west of its No. 1, which ran into igneous rock at 1,770 feet and was abandoned. Homer C. Mills, Inc.'s No. 1, C NW SW Section 29-6n-3e, Tome grant, is drilling at 500 feet after setting 15½-inch at 450 feet. Gravity Petroleum Co.'s No. 1 Clara R. Reed, Section 30-11n-9w, Grant district, has completed cellar and has some material on the ground.

McKinley County

An increase in drilling operations in McKinley County is reported following the recent announcement that the Transport Refining Co. will build a 32-mile 4-inch pipe line from McKinley County to Prewitt (Baca station) on the Atchison, Topeka & Santa Fe Railroad. The Ross Engineering Co. of Albuquerque, has completed the survey for this line and the Kelly Pipe Co. has the contract to lay the line. Actual work is awaiting an agreement with the Department of the Interior regarding the use of Indian labor on those portions which cross Indian land. Leslie Welch, C. C. Worland and James T. Hurst, pioneers in Wyoming oil development, are interested in the project. A refinery at Lovell, Wyo., owned by these interests, is being dismantled for removal to Prewitt.

Verse Wilmirth and others are reported to have taken over the S. Dyart operation in the Ambrosia Lake region at a sheriff's sale. Miss Dysart's No. 1 Bouton, NW NE Section 14-14n-10, which has been standing at 1,285 feet for more than a year, will be deepened. Her test in the SW cor. Section 21-14-9w, was a water well at 1,699 feet.

Gravity Petroleum Co.'s No. 1 Carpenter, formerly Johnsonwood Oil Corp.'s No. 1, SW cor. Section 12-15n-10w, Walker Dome, is preparing to resume at 865 feet and will go to the Dakota expected at 1,060 to 1,160 feet. The Gravity company has taken over the Charles Neustadt permit on what is locally known as the Postmaster Dome, and will deepen No. 1, NE NW Section 24-15n-9w, from 300 feet, at which depth it is in a 15½-inch hole.

COLORADO

Weld County

W. R. Ramsey's No. 1 Tighe, SW NE SE Section 15-7n-59, in the Buckingham-New Raymer district in northeastern Colorado, is expected to drill into the Muddy sand within a few days and disclose whether there is to be a revival of drilling in that district, or another long wait. The test is shut down at 6,558 feet while the boilers are being repaired. When it resumes, it will drill to 6,600 feet and then begin coring. A revision of the data on the Timpas lime was made this week. First reports put it at 6,064-89 feet, but subsequently upon drilling deeper the formation was encountered and definitely placed at 6,165-6,625 feet. It may vary 5 or 10 feet in either direction as the datum was established on cuttings from the rotary bit as they flowed out of the hole. The Timpas was not cored. This puts the well about 275 feet higher than Greasewood on the bottom of the lime. The Muddy is expected at somewhere around 6,620 feet. The other wells in this area, except Ohio Oil Co.'s No. 1 Butters, C SW SW Section 7-6n-60, northeast of the Greasewood producers, are shut down awaiting the outcome of these tests. The Butters well is being deepened to the Dakota and is drilling at 6,746 feet with cable tools. It is believed to be within a few feet of that horizon.

Washington County

A test in Washington County, in the Fremont Buttes district, 7 miles northwest of Akron, is expected to get under way shortly. It is to be drilled in Section 22-3n-53, on the Frank Gilcrest farm. Rig is being moved in from the Middlemist well in the same county.

The Middlemist test in the SE SW SE Section 14-4s-56, on the Middlemist Dome, has been abandoned at 1,552 feet, total depth, and rig is being moved to Akron Oil & Gas Co.'s location. The Middlemist test was started in 1928 by M. T. Smith & Sons. Middlemist Oil Co. then took it over and more recently R. M. Smith and others did some work on it. Frank E. Kistler one time had an option on the well, but there was difficulty in getting the leases straightened out. The rig finally was sold to satisfy a lien upon the property. It did not go deep enough to reach any definite markers and the structure, upon which there is some good geology, remains virgin territory for prospecting.

Adams County

Hills Dome Lease Development's No. 1 Hills, SE cor. Section 27-3s-64, near Watkins, has resumed under the contract recently made with Pulse Drilling Co. The 8¼-inch was cemented at 2,987 feet before operations were suspended several months ago. The plug has been drilled out and 5 feet of new hole made to 3,992 feet.

Las Animas County

Paul W. Harr's No. 1 Barela, NE NW NE Section 33-33s-62, Garcia Dome, was temporarily completed at 1,510 feet for 200,000 feet of gas. It is planned to drill six additional wells to build up a gas supply for a gasoline plant. W. K. Hurd, of Pueblo, is associated with the operation. Harr's No. 1 Schneider, SE SW SE Section 10-33-63, Gray Creek, is drilling at 1,000 feet and had a good show of gas in the Apishapa shale at 980 feet.

Rio Blanco County

The California Co.'s No. 1 California-Raven, NW SE Section 30-2n-102, Rangely Dome, is swabbing down to test. Total depth is 6,228 feet. It began showing streaks of saturated sand at 5,781 feet.

Magnolia Petroleum Co.'s No. 1 Titley, NW cor. SW Section 15-2s-96, Piceance

Creek, is drilling at 2,195 feet in gray and brown lime.

La Plata County

J. W. Irwin & Co.'s No. 1 Doescher, SW cor. NW Section 29-33-13, Dry Mesa, cemented the 6⅝-inch on top of the Dakota at 3,160 feet to shut off water.

Routt County

The Texas Company's No. 1 Irwin-Carstarphen, NE SE NW Section 5-6n-86, Tow Creek, which was deepened from 3,301 feet, is bottomed at 3,500 feet. Mid-Colorado Petroleum Co.'s No. 1 Omholt, NE cor. SE Section 29-4n-87, Fish Creek, had 2,000,000 feet of gas in the Frontier at 1,917 feet. The Sundance is the objective.

WYOMING

Platte County

A test is to be drilled on the Diamond Ranch structure 14 miles west of Chugwater, in Platte County, by T. R. Oberman, of Jefferson City, Mo. Location was made by C. D. Johnson, of Petroleum Information, Inc., Denver, in the NW SE Section 30-21n-68. It will start in the Casper formation of Pennsylvanian age and is expected to test all possible horisons down to the granite at 750 feet.

Converse County

Continental Oil Co.'s No. 30 Glenrock Sheep, SW SE SE Section 4-33-76, Big Muddy, is drilling at 4,565 feet and is believed to be close to the top of the Sundance. This horizon has never been tested in the Big Muddy, but is a good producer in Salt Creek. Ohio Oil Co.'s No. 25 Kinney, SE SW SE Section 4-33-76, is standing with 6¼-inch cemented on top of the Lakota at 4,326 feet. Cores into the Lakota showed considerable saturation.

Niobrara County

Ohio Oil Co.'s No. 2 Comstock & Richards, C NE SW Section 32-36-65, Lance Creek, the second well to be drilled to the Sundance in that field by this company, is bottomed at 3,650 feet. The 6¼-inch was cemented on top of the sand at 3,540 feet and bailing to test is in progress. It will make a good well from present indications. Interstate Oil & Refining Co.'s No. 1, SW cor. SE Section 2-39-61, West Mule Creek, joint with Fall River Royalties & Producers Co., is drilling at 1,500 feet with the Madison lime as the objective. The Sundance was cased off at 1,020 feet with the 12½-inch.

Weston County

Julius Peters and others' No. 1 Witzell, SE cor. NW Section 30-46-64, Fiddler Creek, southwest of the Osage Pool, is bottomed at 4,590 feet and drilling on bridge after being shot with 135 quarts in the Muddy sand. The shot did not explode when first run into the hole and when it was finally set off, the bailer was caught and the hole bridged.

There was one location in the Osage Field in M.S.&W. Co.'s No. 30, SW SE NW Section 30-46-63, in the old part of the field. It is rigging up. There were no completions. Routine operations are as follows:

Federal Oil Co.'s No. 4, NE SE SE Section 15-46-64, is drilling at 1,600 feet, and Tug Oil Co.'s No. 2, NE NW SW Section 15-46-64, is running the 5⅞-inch below 2,700 feet to shut off water. Central Oil Co.'s No. 1, NE cor. SW Section 15-46-64, is bottomed at 2,575 feet and waiting for pipe to shut off water before drilling deeper. The water probably is coming from behind the casing. It had a show of oil at 2,512 feet. General Oil Co.'s No. 1, SW cor. NW Section 15-46-64, is fishing for tools at 2,000 feet, and Paymac Oil Corp.'s No. 1 Toyne, SE NW NE Section 3-46-64, is drilling at 1,200 feet. Riggs Oil Co.'s No. 2, SE NE Section 16-46-64, is drilling at 2,950 feet, and Sandell and others' No. 2, SE SW Section 12-46-64, is drilling at 1,200 feet. Albert Jones' No. 3, NW cor. SE Section 21-46-63, is drilling at 200 feet.

Natrona County

Mutual Oil Syndicate's No. 2, C SW SE Section 14-35-79, Midway Dome, is cleaning out and the fluid, of which 85 per cent is oil, is coming in at the rate of 5 bbls. per hour. Total depth is 6,063 feet.

Summitt Oil Co.'s No. 1 Trevett, NW cor. Section 21-33-80, North Platte, is drilling at 1,595 feet and is believed to be only a few feet off the Muddy sand.

Fremont County

The Texas Company's No. 2 State-Ridgway, SE SW SW Section 36-34-95, Alkali Butte, is drilling at 3,870 feet. Yellowstone Oil Co.'s No. 1 Gabus, SW cor. Section 14-38-94, Shoshoni district, is bottomed at 2,210 feet and sidetracking tools. Ward Oil & Gas Co.'s No. 2, NE cor. Section 28-34-90, Dutton Basin, is bottomed at 4,150 feet and circulating to loosen tools at 2,100 feet.

Carbon County

The Ohio Oil Co. is starting a well on the Dutton Creek structure in its No. 1 Carbon, NW Section 18-18-77, half a mile southeast of the Mutual Oil Syndicate's No. 27. It is drilling at 200 feet with a portable rotary and will go to the Shannon sand. Mutual Oil Syndicate's No. 27, NW SE NE Section 12-18-78, is bottomed at 1,691 feet in the Shannon sand and is running the 6⅝-inch at 1,680 feet. On the Shannon sand it is running 35 feet higher than No. 31 Eades, half a mile to the northwest, which is an oil well in the Muddy at 4,900 feet. The Shannon gas is the objective in the Mutual well.

Lost Soldier Producing Co.'s No. 1, NE NE Section 25-26-88, Mahoney Dome (Schupback, Dane and others), is bottomed at 3,960 feet and has succeeded in sidetracking tools. It is believed to be near the bottom of the Sundance.

Sweetwater County

Wyoming-California Petroleum Co.'s No. 1, SE SE Section 23-17-104, South Baxter Basin, joint with the Montocal Oil Co., has recovered bit and is drilling ahead at 4,100 feet. Mountain Fuel Supply Co.'s No. 1 Mullen, SE cor. NW Section 2-17-104, is drilling at 2,240 feet.

Park County

Henderson Producing Co.'s No. 10, SW NE NE Section 31-58-99, South Elk Basin, is drilling at 1,785 feet, just above the second Frontier, and continues to show gas.

MONTANA

Glacier County

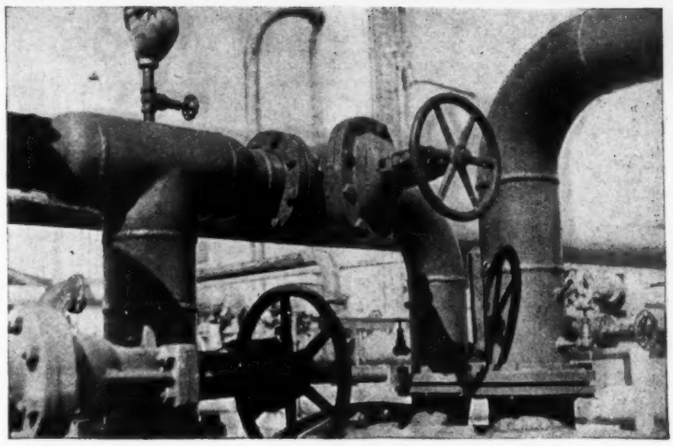
Two wells in the Cut Bank area, both of which will mark important extensions of the district to the southwest of the gas field in which oil has been found, are close to completion. R. C. Tarrant's No. 1 Reickhoff, SE SW NE Section 3-34-6w, in the Blackfeet Indian Reservation, and a little more than a mile to the northwest of B.&H. Oil Co.'s No. 1 Haines, was delayed by collapsed pipe. It topped the sand at 2,921 feet and stopped the run and cemented the 6⅝-inch. The 8¼-inch dropped while being pulled and collapsed the smaller string. Swedging is in progress and the 5-inch bit will go through, but it is not yet in shape to drill in. The top of the sand showed saturation. Montana Power Co.'s No. 1 People's, C SW NW Section 20-34-5w, 2 miles to the southeast of the nearest producer, cemented the 6¼-inch on top of the sand, which showed gas, at 2,712 feet, but at last reports had not drilled in.

R. C. Tarrant's No. 1 Haglund, Sr., NW SW NW Section 13-34-6w, is drilling at 1,840 feet after running the 10-inch, and his No. 1 Yunck, NW cor. Section 12-34-6w, is drilling at 2,569 feet. Tarrant's No. 1 Britton, NE cor. SE Section 14-34-6w, is spudding at 50 feet, and his No. 1 McLellan, C SE Section 7-34-5w, is drilling. Same firm's No. 1 Barnes-Butler, NE cor. Section 24-34-6w, is rigged and ready to spud.

The Texas Company's No. 1 Fisher, C S half, SW Section 10-35-5w, is drilling at 390 feet.

Santa Rita Oil & Gas Co.'s No. 1 Yunck, NE NW NE Section 23-34-6w, is drilling below 1,850 feet, and its No. 2 Yunck, NE cor. SE Section 24-34-6w, is drilling at 450 feet.

Montana Power Co.'s No. 1 Simereo,



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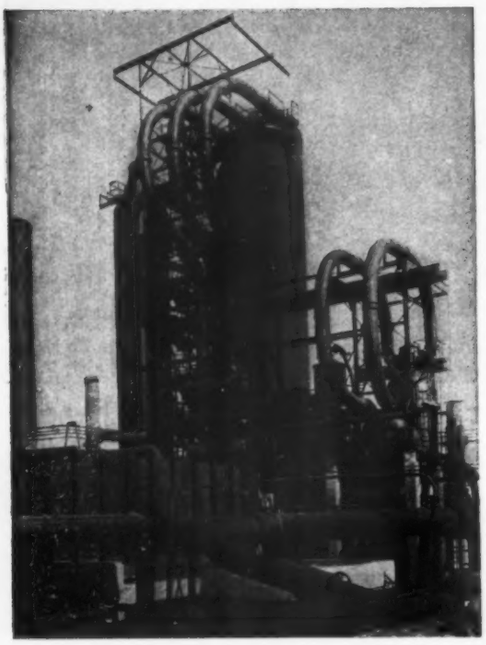

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C N half, Section 5-33-5w, is drilling below 1,600 feet.

B. E. Adams and others' No. 1 Britton, SE cor. NE Section 14-34-6w, is drilling at 380 feet.

Pondera County

Adams-Bell Syndicate's No. 1 Venetz, NE SE NE Section 31-27-3w, South Pondera, failed to find commercial production in either the Sunburst sand or the Ellis-Madison contact and was abandoned at 1,960 feet. There was no break between the Ellis and the Madison and 10 feet below the contact the hole went into sulphur water.

Toole County

West Side Oil Syndicate's No. 1 Haugen, NW cor. SE Section 11-35-3w, on a local high in the west end of the Kevin-Sunburst Field, had a showing of oil in the Sunburst at 1,517-48 feet and found the Ellis-Madison contact at 1,774 feet dry. It is drilling ahead to a break in the lime expected just below the present bottom. Eagle Oil Syndicate's No. 1 Haugen, CWL NW NW Section 12-35-3w, is drilling at 1,620 feet in the Sunburst sand, 15 feet below the top, with considerable oil in the hole. It is logging 100 feet lower than West Side Syndicate's well. There is a fault running between the two wells. William Hewson's No. 1 Van Note, CWL NW NW Section 30-35-2w, is drilling below 1,100 feet, and Pfabe & Engleking's No. 4 Seabrook, SE SE Section 19-35-2w, is drilling below 300 feet.

Golden Valley County

Golden Valley Oil Co.'s No. 1, SW SE SE Section 26-6n-22, Belmont district, is drilling at 3,400 feet with the 8¼-inch on bottom.

Carbon County

Ohio Oil Co.'s No. 11 Bowman, C SE NE Section 4-7s-21, Dry Creek, which will mark a northwest extension of the pool, recemented at 5,928 feet, in the Lakota, which is showing considerable oil.

Carbon Oil & Gas Co.'s No. 1 McMinn, NW SW SW Section 7-7s-22, has resumed at 4,479 feet. It is through the Frontier and on its way to the Dakota.

UTAH

Ramsey Petroleum Corp.'s No. 1 Senior, C NE NW Section 18-26-7e, Last Chance Dome, Emery County, cemented 15½-inch at 250 feet and is drilling ahead. Utah Southern Oil Co.'s No. 1 Balsey, C NE NE Section 31-23-21, Grand County, is fishing for tools at 6,065 feet.

WASHINGTON

Ohio Oil Co.'s No. 1-A Robinson, Section 5-17n-9w, Gray's Harbor County, is coring at 5,350 feet.

New Midland County, Mich., Producer Shows Initial Output of 1,030 Bbls.

By GEORGE A. WHITNEY

MOUNT PLEASANT, Mich., Oct. 17. The best of the late completions in the Central Michigan fields was the Talbot Oil Co.'s No. 2-B well, 330 feet from the south and east lines of the State of Michigan land, SE SE SE Section 11, Greendale Township, Midland County, which is reported to have shown an initial of 1,030 bbls. from the Dundee formation, and was an offset to the west of Walter McClanahan, Inc.'s No. 1 on the Schaeffer farm. The big production came after a treatment of acid. East of the McClanahan, Inc., well on the Schaeffer farm, the G-P-Lee Oil Co.'s No. 2 well, 330 feet from the south line and 1,650 feet from the east line of the William Schaeffer farm, SE SW SW Section 12, Greendale Township, showed an initial around 75 bbls., and will be given treatment in hope of increasing output.

The Pure Oil Co.'s No. 1 Bemis-Brown, in the northeast corner of the farm, and in NE NE NW Section 14, Greendale Township, is reported at an initial of 200 bbls. Same company's No. 2 on the George Lilly farm is estimated at 50 bbls. initial, and in Section 18, same township. No. 3 well, 2,310 feet from the north and east lines of the George Lilly farm, same section, produced 57 bbls. initially.

R. D. Malcolm's No. 1, in the northwest corner of the Nickerson farm, NW NW NE Section 13, Greendale Township, reported with an initial of 125 bbls.

Thompson Brothers' No. 2-A on the Rhimenschnider farm, Section 13, Greendale Township, Midland County, drilled in recently, is reported to have produced 300 bbls. in 12 hours and more than 500 bbls. for the full 24 hours' gauge.

Pure Oil Co.'s No. 1 well, 2,310 feet from the south line and 330 feet from the east line of the James P. Moffett farm, NE NE NW Section 14, Greendale Township, should make under pump about 60 bbls. in 24 hours, but is being tested in hope of increasing the flow.

The Pure Oil Co. is due for completion within a few days in its No. 6 Purtell, NW Section 15, Greendale.

Pacific Oil & Gas Co. is drilling in the Dundee in the northeast corner of the Charles S. Hoyt farm, NW NW NE Section 27, Jasper Township, Midland County.

Two wells are due for completion in the Vernon Field of Isabella County, being John C. Arthur Inc.'s No. 3 on the J. and C. Schug farm, E half S half SW Section 22 and No. 2 on the C. Thayer farm, NW NW SW Section 23, Vernon Township.

Homer C. Leonard, trustee's No. 1 on the Leon G. Slentz farm, NW NW SE Section 22, Vernon Township, Isabella County, flowed an initial of 60 bbls. after treatment.

Gas Well

Isabella Oil Development Co.'s No. 2 well, 660 feet from the north and west lines of the Bartlett-McClintic farm, NW SW Section 3, Broomfield Township, Isabella County, about 12 miles west of Mount Pleasant, showed 4,500,000 feet.

James G. Tiplady, trustee, secured a permit for drilling No. 1 well, 330 feet from the south and east lines of the Henry L. and Susan S. Laycock farm, SE SE NW Section 11, Arcadia Township, Gratiot County. A permit was issued to C. Fred White and others for No. 1 well, 330 feet from the south and east lines of the W. A. Dennis and others' farm, SE SE SW Section 3, Chippewa Township, Isabella County; to Robert S. Anderson, for No. 1 well, 1,815 feet from the north line and 712 feet from the east line of the John Conkright and others' farm, SW Section 29, North Porter Township, Cass County; and to H. and W. Feicke for No. 2 well, 670 feet from the south line and 860 feet from the west line of the H. and W. Feicke farm, SE SW SE Section 1, Fruitland Township, Muskegon County.

MIKE FRAMILEY DIES

CORSICANA, Tex., Oct. 15.—Mike Framiley, 80, pioneer oil well driller, connected with the American Well & Prospecting Co. here since its organization, died this week. He aided in the drilling of many of the old shallow oil wells in the Corsicana Field in the nineties.

I.P.A.A. ANNUAL MEETINGS

The annual meeting of the Independent Petroleum Association of America will open at the Mayo Hotel, Tulsa, 10 a. m., November 14.

The annual convention of the Independent Petroleum Association of Texas will be held in Fort Worth on December 9.

Wildcat Operations in Kansas

(Continued from Page 53)

RICE COUNTY

R. Ramsey's No. 1 School Lot, NW SW NW Sec. 32-19-9w. Rig.
Langston et al's No. 1 Wells, NE SE Sec. 4-20-9w..... Drlg. 725 ft.
J. Liggett et al's No. 1 Thodel, C NW NW Sec. 11-21-7w.. S.D. 50 ft.

RUSH COUNTY

Barnadall's No. 1 Schultz, SW cor. Sec. 3-19-16w..... Drlg. 3,451 ft.
Skelton et al's No. 1 Brock-Hartman, SW SE NE Sec. 4-18-16w ..... S.D. 50 ft.

SEDGWICK COUNTY

Scroggins et al's No. 1 Bartlett, NW SE NW Sec. 35-27-1 ..... S.D. 1,522 ft.

SHERIDAN COUNTY

Flo et al's No. 1 Shoemaker, SE SW Sec. 27-7-26w..... H.F.W. 4,535-45 ft., S.D.

STEVENS COUNTY

Louisville Gas & Const.'s No. 1 Phillips, C SE Sec. 11-35-35 ..... Rig.
Argus Prod.'s No. 2 Christopher, C NE Sec. 10-33-39w.... S.D. 5,521 ft.,

STAFFORD COUNTY

Stringer et al's No. 1 Swindle, SW NE Sec. 2-25-11w..... Spud; S.D.

SUMNER COUNTY

Austin et al's No. 1 Fog, SW SE SE Sec. 14-34-1w..... Drlg. 3,560 ft.
Trees Oil Co.'s No. 1 Tompkins, SW Sec. 26-33-1 ..... Location.
Trees Oil Co. and Shell's No. 1 Springate, NE SE SW Sec. 6-34-2 ..... S.D. 3,639 ft.

Gulf Coast Fields and Wildcats

(Continued from Page 55)

LOST LAKE—CHAMBERS COUNTY

Pure Oil Co.'s No. 16 Mayes, E. H. R. Wallis Sur., 1,825 ft. N and 1,429 ft. E of No. 1 Lost River ..... Drlg. sticky shale with streaks of lime 1,402 ft.

ORCHARD—FORT BEND COUNTY

Gulf Prod. Co.'s No. 34 Moore, Mark Smith Sur. ..... Hard sand 3,500 ft.; making D.S. test.

RABBS RIDGE—FORT BEND COUNTY

Gulf Prod. Co.'s No. 2 Gubbels, Samuel Kennedy Sur. (location to come) ..... Drlg. gumbo 3,921 ft.
Gulf Prod. Co. and Humble O. & R. Co.'s No. 5-A F. I. Booth, 400 ft. E and 300 ft. S of SW cor. of Gubbels 100-ac. tr., Blk. 4, Samuel Kennedy Sur. ..... Drlg. sand and shale 5,136 ft.
Gulf Prod. Co. and Humble Oil & Ref. Co.'s No. 3 T. R. Booth, Samuel Kennedy Sur., 2,991 ft. from W line and 487 ft. from E line of E half of tract (452 ac.).. Comp. flowing 83 bbls. hourly, ½-in. choke, 5,200 ft.
Gulf Prod. Co. and Humble O. & R. Co.'s No. 4 Meyers, John Rabb Sur., 250 ft. E of No. 3 ..... Sand and shale 5,268 ft.
Gulf Prod. Co. and Humble Oil & Ref. Co.'s No. 5 Meyers, J. Rabb Sur., 1,000 ft. W and 250 ft. N of SE cor. of Meyers 188-acre tract ..... Derrick.
Humble Oil & Ref. Co. and Gulf Prod. Co.'s No. 4 T. R. Booth, Samuel Kennedy Sur. (location to come) .... Rig.
Humble Oil & Ref. Co. and Gulf Prod. Co.'s No. 6-A F. I. Booth, Samuel Kennedy Sur. ..... Drlg. sticky shale 1,754 ft.
Humble Oil & Ref. Co. and Gulf Prod. Co.'s No. 7-A F. I. Booth, Samuel Kennedy Sur. ..... Derrick.
Humble Oil & Ref. Co. and Gulf Prod. Co.'s No. 3 Davis, Robt. Peebles Sur., 2,985 ft. from W line and 350 ft. from N line ..... Coring sand 5,838 ft.
Humble Oil & Ref. Co. and Gulf Prod. Co.'s No. 8 George, John Rabb Sur., 1,000 ft. E of No. 4 ..... Coring sand 5,190 ft.
Humble Oil & Ref. Co. and Gulf Prod. Co.'s No. 3-A George, J. Rabb Sur., 1,000 ft. from W line and 350 ft. from S line of tract ..... Derrick.
Humble Oil & Ref. Co. and Gulf Prod. Co.'s No. 5 Lockwood, John Rabb Sur., 800 ft. from N line and 1,000 ft. from W line of 380-ac. tract ..... Drlg. shale 1,256 ft.
Humble Oil & Ref. Co. and Gulf Prod. Co.'s No. 6 Lockwood, 4,000 ft. E and 323 ft. N of SW cor. ..... Derrick.
Humble Oil & Ref. Co. and Gulf Prod. Co.'s No. 9-A Lockwood & Sharp, J. Rabb Sur., due S offset Gulf and Humble's No. 4 Meyers ..... Rig.
Humble Oil & Ref. Co. and Gulf Prod. Co.'s No. 10-A Lockwood & Sharp, J. Rabb Sur. ..... Drlg. shale and lime 3,409 ft.
Humble Oil & Ref. Co. and Gulf Prod. Co.'s No. 5-B Lockwood & Sharp, John Rabb Sur., 800 ft. W of No. 4 ..... Drlg. shale 2,584 ft.
Humble Oil & Ref. Co. and Gulf Prod. Co.'s No. 6-B Lockwood & Sharp, John Rabb Sur., 800 ft. E of No. 4 ..... Drlg. sand and shale 1,146 ft.
Humble Oil & Ref. Co. and Gulf Prod. Co.'s No. 1 R. A. and O. H. Wolters, Robt. Peebles Sur., 325 ft. S and 500 ft. W of NE cor. of 1,000-ac. tract ..... Derrick.
Humble Oil & Ref. Co.'s No. 1 Gubbels, Samuel Kennedy Sur., 750 ft. N and 775 ft. W of SE cor. of Mrs. Mary Gubbels 90.6 acres ..... Derrick.
The Texas Company's No. 2 Wolters, Samuel Kennedy Sur., 350 ft. out of SE cor. of 100-ac. lease ..... Set 114 ft. of 4¾-in. screen 5,280 ft.; comp. flowing 83 bbls. hourly, 8 pct. b.s., ½-in. choke; 400 lbs. on tubing, 200 lbs. on csg.
The Texas Company's No. 3 Wolters, Samuel Kennedy Sur., 750 ft. N of No. 2 and 300 ft. W of E line ..... Derrick.

HIGH ISLAND—GALVESTON COUNTY

Yount Lee Oil Co.'s No. 31 Cade, N. Fitzsimmons Sur., midway between and in line with Nos. 21 and 29 Cade ..... Set 18 ft. of 5-in. screen 5,456 ft.
Yount Lee Oil Co.'s No. 2 Broussard & Orme, Martin Duman Sur., 300 ft. SE of No. 1 ..... Sand showing gas 6,004 ft.
Yount Lee Oil Co.'s No. 32 Cade, N. Fitzsimmons Sur., 600 ft. due S of No. 30 ..... Drlg. sand and lime 2,725 ft.
Yount Lee Oil Co.'s No. 13 Smith, Mart'n Dunman Sur., 600 ft. W of No. 12 in line with Nos. 11 and 12..... Rigging up.
Yount Lee Oil Co.'s No. 2 M. M. Spencer, Martin Dunman Sur., center of tract in line with No. 11 Smith and No. 2 Nellie League ..... No report.

MANVEL—BRAZORIA COUNTY

The Texas Company's No. 2 Ewing, 1,230 ft. southwesterly and 200 ft. northwesterly at right angles out of E cor. of Blk. E of Suburban Gardens Subd., Harvey N. Little Sur. ..... Drlg. shale and lime 2,842 ft.

BATSON—HARDIN COUNTY

W. C. Christian's No. 1 Buchanan, Josephine Milholme Sur., 800 ft. from W line and 110 ft. from S line of 4.15-acre tract ..... Rig.

SARATOGA—HARDIN COUNTY

Rio Bravo Oil Co.'s No. 89 Jordit ..... Sandy shale showing oil 937 ft.
Rio Bravo Co.'s No. 400 "B" ..... Water sand 242 ft.; abnd.

SOUR LAKE—HARDIN COUNTY

Houston Prod. Co.'s No. 1 Merchant, Stephen Jackson Sur., 90 ft. from E line and 1,226 ft. from S line of lease ..... Cap rock 4,051 ft.
Jackson Mineral Oil Co.'s No. 1 Lula Hebert, 50 ft. from N line and 72 ft. from E line of 2-acre tract, Lot 3, Stephen Jackson Sur. ..... Cap rock 2,885-92 ft.
M. M. Miller's No. 1 Lib'le Oil Co., Stephen Jackson Sur., 1,380 ft. NW of Houston Prod. Co.'s No. 1 Merchant ..... Rigging.

HUMBLE—HARRIS COUNTY

Sun Oil Co.'s No. 28 Bender, W. B. Adams Sur., 350 ft. W of No. 27 ..... No report.
Sun Oil Co.'s No. 59 River, R. Dunman Sur., 74 ft. from E line and 1,441 ft. from S line of block ..... Standing 370 ft.

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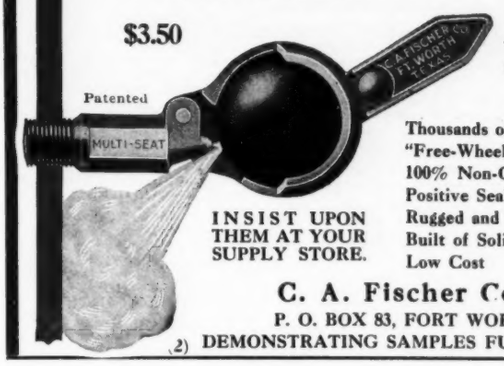

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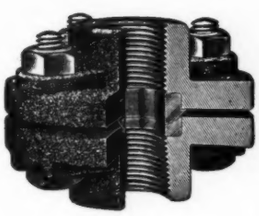

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Sun Oil Co.'s No. 62 River, Robert Dunman Sur., 100 ft. due E of J. D. Clay's No. 3 Bender ..... Set 44 ft. 5-in. screen 1,188 ft.; comp. flowing 35 bbls. daily.

J. O. Williams' No. 1 Stockdick, James Strong Sur., 100 ft. out of SE cor. of 22-acre lease ..... No report.

MYRAWA—HARRIS COUNTY

Crown-Framer Oil Co.'s No. 3 Minnetex, 100 ft. from N line and 100 ft. from E line of W half of Block 251, Wm. Lovett Sur. ..... Drlg. shale 4,612 ft.

Hamill & Smith's No. 1 Ward, 50 ft. out of SE cor. of Ward 10-ac. tract, Blk. 136, Wm. Lovett Sur. ..... Drlg. shale 4,843 ft.

PIERCE JUNCTION—HARRIS COUNTY

Gulf Production Co.'s No. 35 Taylor, Hamilton Sur. No. 52, 50 ft. S of No. 1 ..... T.D. 4,650 ft.; sidetracked 3,720-3,858 ft.; set 1 jt. screen; rig up to pump; standing.

Rio Bravo Oil Co.'s No. 12 fee, J. Kopman Sur., 350 ft. from N line and 150 ft. from W line of tract ..... Salt 3,905-26 ft.; plugged to 3,464 ft.; set whipstock 3,458 ft. and milling out at 3,431 ft.

Rio Bravo Oil Co.'s No. 25-A Settegast, 625 ft. W and 525 ft. N of SE cor. "A" lease, Jas. Kopman Sur. No. 44 ..... T.D. 4,142 ft. in shale; sand showing oil 4,082-4,141 ft.

Rio Bravo Oil Co.'s No. 26-A Settegast, J. Kopman Sur., 1,310 ft. from N line and 750 ft. from E line of "A" lease ..... Derrick.

Rock Drlg. Co.'s No. 1 Hooks, Jas. Hamilton Sur. No. 53, 100 ft. S and 60 ft. E of Humble's No. 1 Hooks ... T.D. 4,265 ft.; drill stem stuck.

FANNETT—JEFFERSON COUNTY

Gulf Prod. Co.'s No. 6 Burrell, Wm. Smith Sur., 1,610 ft. N and 300 ft. E of SW cor. of 232-acre tract ... Drlg. sticky shale 3,882 ft.

John R. Turnbull's No. 1 Junker, Wm. Smith Sur., 125 ft. N and 100 ft. E of Gulf Prod. Co.'s No. 1 Junker in 260-acre tract ..... Derrick.

CLAY CREEK—WASHINGTON COUNTY

Clay Creek Oil Co.'s No. 1 Bimage, C of E half J. P. Perry Sur., 200 ft. from W line and 1,300 ft. from S line of 242-acre tract ..... A'nd. 1,706 ft.

ESPERSON—LIBERTY COUNTY

Cranfill-Reynolds Co.'s No. 7 Davis (D.D.), David L. Kokernut Sur. ..... Rig up to deepen 6,302 ft.

Cranfill & Reynolds' No. 5 Esperson (W.O.), M. Duncan Sur., 100 ft. N line and 300 ft. E line ..... Drlg. sand and shale 6,760 ft.

Cranfill-Reynolds Co.'s No. 9 Moore's Bluff, M. Duncan Sur., 500 ft. S of N line of Moore's Bluff tract in line with No. 6 Davis and No. 6 Moore's Bluff ..... Location.

Cranfill-Reynolds Co.'s No. 10 Moore's Bluff, M. Duncan Sur., 1,500 ft. from E line and 2,100 ft. from N line of 632-ac. tract ..... Drlg. shale 3,445 ft.

HULL—LIBERTY COUNTY

Aberoil Co., Inc.'s No. 1 fee, Jesse DeVore Sur., 100 ft. from E line and 64 ft. from N line ..... Shut down 42 ft.

Carpenter & Parr's No. 1 Antilley, Jesse DeVore Sur., 100 ft. out of NE cor. of Antilley 20-acre tract ..... No report.

Eclipse Oil Co.'s No. 1 Knox-Nelson-Layton, Jesse DeVore Sur., 30 ft. from N line and midway E and W of ½-acre tract ..... Derrick.

Empire G. & F. Co.'s No. 24 Barngrover, Jesse DeVore Sur., 75 ft. out of SW cor. of lease ..... Sand 4,364 ft.; cmtd. 9⅝-in. csg. 4,305 ft.

Fondren & Snowden's No. 1 Humble fee, Jesse DeVore Sur., 250 ft. from E line and 50 ft. from S line of Humble Oil & Ref. Co.'s Hooks-Carr fee 6 acres ..... Shale 1,956 ft.; set 6⅝-in. csg. 1,917 ft.

Gulf Prod. Co.'s No. 81 Dolbear (W.O.), 1,560 ft. from N line and 2,440 ft. from W line ..... Abnd. 3,042 ft.

Hannah Oil Co.'s No. 1 Hannah, Jesse DeVore Sur., 100 ft. W of The Texas Co.'s No. 1 Hannah ..... No report.

Houston Prod. Co.'s No. 1 Baldwin, Jesse DeVore Sur., 222 ft. from S line and 50 ft. from E line of 5-acre tract ..... Sand 5,015 ft.

Republic Prod. Co.'s No. 19 Dolbear (W.O.), Jesse DeVore Sur. ..... Drlg. 2,805 ft.

Republic Prod. Co.'s No. 141 Dolbear (W.O.), Jesse DeVore Sur. ..... Drlg. sand and shale 2,860 ft.

NORTH DAYTON—LIBERTY COUNTY

V. H. Borsodi's No. 2 Gulf fee (W.O.), H.&T.C. Sur., 400 ft. from N line and 82 ft. from E line of tract .. Sand 5,088 ft.

Ferguson & Head's No. 1 Quintette, H.&T.C. Sur., 48 ft. E of W line and 674 ft. N of S line of 10-acre tract ..... Drlg. gumbo 1,200 ft.

SOUTH LIBERTY—LIBERTY COUNTY

Mecom Oil Co.'s No. 1 Barrett, M. G. White Sur., 365 ft. from S line and 155 ft. from E line of lease ..... Drlg.

CONROE—MONTGOMERY COUNTY

Gulf Coast Drlg. & Prod. Co.'s No. 1 Keystone Mills, 300 ft. out of NE cor. of A. S. James (T.&N.O. No. 4) Sur. ..... Sand and shale showing oil and gas 4,985-5,009 ft.; cmtd. 7-in. csg. 4,985 ft.; standing.

Gulf Coast Drlg. & Prod. Co.'s No. 2-B South Texas Dev. Co., Theo. Slade Sur., 466 ft. out of SW cor. of 40-acre lease ..... Set 22 ft. of 5-in. screen 5,160 ft.; swabbing.

W. B. Hamilton et al's No. 1 Moorehead, J. McHorse Sur., 466 ft. from S line and 466 ft. from W line of Hill & Hill Moorehead 40-acre tract ..... Drlg. shale and sand 2,115 ft.

Hooper-Rutherford Oil Co.'s No. 2 Hooper, I.&G.N. Sur., Abst. 649, 708 ft. S of No. 1 in center of tract E and W ..... Rig.

Hooper-Rutherford Oil Co.'s No. 3 Hooper, I.&G.N. Sur., Abst. 649, 782 ft. S of No. 2 in center of tract E and W ..... Location.

Houston Oil Co. and Heep Oil Co.'s No. 1 Dobbins, Ransom House Sur., 466 ft. east of W line in center north and south of 100-ac. tract ..... Set 15½ ft. of 5-3/16-in. screen 5,050 ft.; swabbing.

Humble Oil & Ref. Co.'s No. 2 Dobbins, Ransom House Sur., 1,400 ft. northeasterly along SE line of lease from SW cor. and 466 ft. northwesterly at right angles ..... Drlg. shale 3,666 ft.

Humble Oil & Ref. Co.'s No. 1 Madeley, Ransom House Sur., 466 ft. northwesterly at right angles from S line of tract and 518 ft. easterly from NW cor. of Dobbins 329.6 acres ..... Drlg. sticky shale 4,992 ft.

Humble Oil & Ref. Co.'s No. 2 Madeley, Ransom House Sur., 466 ft. southwesterly along southernmost SE line from SE cor. of tract and 466 ft. northwesterly at right angles ..... Derrick.

Humble Oil & Ref. Co.'s No. 1 South Texas Dev. Co. (D.D.), 468 ft. westerly along N line of Theo. Slade Sur. from SW cor. A. McCown Sur., thence 750 ft. southerly at right angles ..... Rig up to deepen 4,991 ft.

Humble Oil & Ref. Co.'s No. 3 South Texas Dev. Co. (W.O.), Theo Slade Sur. ..... Set 66 ft. 5 ins. of 5-in. screen at 5,100 ft.; comp. flowing 675 bbls. ½-in. choke.

Humble O. & R. Co.'s No. 10 South Texas Dev. Co., 1,-136 ft. from S line and 660 ft. from E line of Sur. .. Set 47 ft. 5 ins. of 5-3/16-in. screen 5,164 ft.; comp. flowing 31 bbls. hourly, 9/16-in. choke, 784 lbs. on tubing and 1,100 lbs. on csg.

Humble Oil & Ref. Co.'s No. 11 South Texas Dev. Co., Theo. Slade Sur., 466 ft. S and 466 ft. E of SW cor. of 40-acre "B" lease ..... Oil sand 5,126 ft.; cmtd. 7-in. csg.

Humble Oil & Ref. Co.'s No. 12 South Texas Dev. Co., 466 ft. S and 4,750 ft. E of SW cor. of Theo. Slade Sur. ..... Set screen 5,152 ft.

Humble Oil & Ref. Co.'s No. 13 South Texas Dev. Co., 466 ft. S and 466 ft. W of SE cor. of A. M. Folks Sur. ..... Drlg. shale and shell 4,866 ft.

Humble Oil & Ref. Co.'s No. 14 South Texas Dev. Co., 1,100 ft. N along NE line of T. C. Howell Sur. and thence 466 ft. westward at right angles ..... Drlg. shale and shell 2,022 ft.

Humble Oil & Ref. Co.'s No. 15 South Texas Dev. Co., 1,850 ft. northward along E line of Theo. Slade Sur. from SE cor. and thence 600 ft. westward at right angles in Lot 2 ..... Drlg. sticky shale and shell 3,464 ft.

Humble Oil & Ref. Co.'s No. 16 South Texas Dev. Co., Theo. Slade Sur., 657 ft. S of No. 10 and 677 ft. from E line of survey ..... Drlg. shale and lime 3,138 ft.

Humble Oil & Ref. Co.'s No. 17 South Texas Dev. Co., 466 ft. W of E line of Gulf Coast Drlg. & Dev. Co.'s "B" lease and 297 ft. S of N line of Theo. Slade Sur. .. Drlg. sticky shale 3,270 ft.

Humble Oil & Ref. Co.'s No. 18 South Texas Dev. Co., 495 ft. E and 165 ft. N of NE cor. of Blk. 42, Alex McCown Sur. ..... Drlg. shale and lime 2,906 ft.

Humble Oil & Ref. Co.'s No. 19 South Texas Dev. Co., 30 ft. N and 682 ft. W of SE cor. of T. C. Howell Sur. . Rigging.

Humble Oil & Ref Co.'s No. 20 South Texas Dev. Co., 765 ft. S and 671 ft. W of NE cor. of Theo. Slade Sur. ..... Derrick.

Humble Oil & Ref. Co.'s No. 21 South Texas Dev. Co., T. C. Howell Sur., 933 ft. NE of No. 8 and 709.8 ft. NW of survey line ..... Derrick.

Humble Oil & Ref. Co.'s No. 22 South Texas Dev. Co., Theo Slade Sur., 333 ft. SW of SE cor. of Alex McCown Sur., thence 500 ft. S at right angles ..... Derrick.

Humble Oil & Ref. Co.'s No. 23 South Texas Dev. Co., Theo. Slade Sur., 660 ft. N of No. 9 and 350 ft. E of E line of Gulf Coast Drlg. & Dev. Co.'s 60-acre tract .. Location.

Humble Oil & Ref. Co.'s No. 1 Alexander, NE cor. of J. McHorse Sur. ..... Derrick.

Humble O. & R. Co.'s No. 3 Cartwright, John Davis Sur., 289 ft. from N line and 395 ft. from W line of Freeman 36 acres ..... Set 55 ft. of 5-in. screen 5,130 ft., comp. flowing 48 bbls. hourly ⅝-in. choke, 775 lbs. on tubing and 240 lbs. on csg.

Humble O. & R. Co.'s No. 4 Cartwright, John Davis Sur., 660 ft. out of NW cor. of tract ..... Set 67 ft. 5-in. screen 5,180 ft., comp. flowing 75 bbls. hourly, ½-in. choke; 720 lbs. on tubing and 500 lbs. on csg.

Humble Oil & Ref. Co.'s No. 5 Cartwright, 694 ft. W and 370 ft. N of NE cor. of J. D. Watson Sur. in John Davis Sur. ..... Drlg. shale and gumbo 4,741 ft.

Humble Oil & Ref. Co.'s No. 6-A Cartwright, John Davis Sur., 671 ft. from W line and 376 ft. from S line of lease ..... Derrick.

Humble Oil & Ref. Co.'s No. 1 Gholson & Cartwright, 512 ft. N and 300 ft. E of SW cor. of E half of John Davis Sur. ..... Sand 5,011-29 ft.; cmtd. 7-in. csg 5,011 ft.

Humble Oil & Ref. Co.'s No. 2 Plaefflin, W. N. Real Sur. 671 ft. from W line and 326 ft. from N line of 110-acre tract ..... Drlg. sticky shale 991 ft.

Navarro Oil Co.'s No. 1 Rhoden, Wilson Strickland Sur., 470 ft. from S line and 430 ft. from E line of 16-acre tract ..... Derrick.

James Papadakis' No. 1 Stella McDonald, John Davis Sur., 241½ ft. from E line, 202.8 ft. from S line of 5-acre tract ..... Drlg. rock 1,338 ft.

Albert Plummer's No. 1 South Texas Dev. Co., E half of Blk. 43, Alex McCown Sur. ..... Drlg. gumbo 3,300 ft.

Rowe & Flowers' No. 1 Alexander, 330 ft. out of SE cor. Lot 20 in the NW A. McCown Sur. ..... T.D. 5,254 ft.; plugged to 5,096 ft.; set 30 ft. screen; tested S.W. and some oil; abnd.

Showers & Moncrief's No. 1 R. R. Dunn, M. W. Real Sur., 100 ft. S of C of N 20 acres of Moncrief 30 acres ..... Drlg. sand and clay 300 ft.

Southland Oil Co.'s No. 1 Cummings, Wilson Strickland Sur., 466 ft. out of NE cor. of 104-acre tract ..... Drlg. sandy shale 2,081 ft.

Steinberger et al's No. 1 Hooper, J. D. Watson Sur., 466 ft. from N line of 10-acre tract in C E and W ... Set 35 ft. 10 ins. of 5-3/16-in. screen 5,044 ft.; comp flowing 50 bbls. hourly, ⅝-in. choke.

G. W. Strake's No. 1 Lewis, Chas. Stewart Sur., 1,400 ft. E of W line and 2,200 ft. N of S line ..... Rigging up.

The Texas Company's No. 1 Moody, 1,400 ft. easterly and 466 ft. southerly out of NW cor. of Moody 494-acre lease, Ranson House Sur. ..... Drlg. sticky shale 3,618 ft.

PORT NECHES—ORANGE COUNTY

The Texas Company's No. 2 Polk-Kuhn-Glass, 350 ft. E and 100 ft. S of SW cor. of Marshall Beauchamp Sur. ..... Sand and shale showing oil 3,473-83 ft.; cmtd. 9⅝-in. csg. 3,458 ft.; drlg. plug.

REFUGIO—REFUGIO COUNTY

Hewitt & Dougherty's No. 1 M. F. Lambert, Wm. Hewa and L. Brown Sur., 4,350 ft. NE along NW line from SW cor. of United Prod. Corp.'s M. F. Lambert lease and thence 990 ft. SE at right angles ..... Shale 6,460 ft.

SOUTH LOUISIANA FIELDS

JENNINGS—ACADIA PARISH

Olympic Oil Co.'s No. 1 Luckett, 1,150 ft. S and 75 ft. W of NE cor. of Sec. 42-9s-2w ..... Rig.

Mount Lee Oil Co.'s No. 11 Housierre-Latrielle, 1,010 ft. N and 5,050 ft. S of SW cor. of Sec. 47-9s-2w ..... Drlg. 5,425 ft.

SORRENTO—ASCENSION PARISH

Union Sulphur Co.'s No. 22 United Land Co., 5,760 ft. N and 1,360 ft. W of SE cor., Sec. 15-10s-4e ..... Set screen to test sand 4,506 ft.

IOWA—CALCASIEU AND JEFF DAVIS PARISHES

Magnolia Pet. Co.'s No. 2 Waite, 330 ft. out of NE cor. SE, Sec. 12-9s-7w ..... Set 1 ft. of 3-in. screen 6,900 ft.; comp. flowing 2 000 bbls. daily, 2,000 lbs. pressure, 5/16-in. choke.

Shell Pet. Corp.'s No. 2 Fontenot, 225 ft. E and 325 ft. N of SW cor. of Sec. 7-9s-6w ..... Drlg. brittle shale 6,237 ft.

EDGERLY—CALCASIEU PARISH

The Texas Company's No. 1 Miller Estate, 150 ft. E and 150 ft. S of NW cor. of NE of Sec. 27-9s-11w ..... Sandy shale 4,952 ft.

SULPHUR—CALCASIEU PARISH

Union Sulphur Co.'s No. 770 fee, 292 ft. S, 1,243 ft. W of center, Sec. 29-9s-10w ..... Drlg. shale and boulders 3,422 ft.

Union Sulphur Co.'s No. 772 fee, 145 ft. S, 892 ft. W of center, Sec. 29-9s-10w ..... Salt 3,968-5,009 ft.; plugged to 3,849 ft.; sidetracked at 3,486 ft.

Union Sulphur Co.'s No. 774 fee, 226 ft. W, 114 ft. S of center of Sec. 28-9s-10w ..... Drlg. gumbo 2,300 ft.

VINTON—CALCASIEU PARISH

Gulf Ref. Co.'s No. 6 Gray, Sec. 33-10s-12w, 160 ft. W of No. 3 ..... Heaving shale 3,342 ft.; temp. abnd.

Marrs McLean's No. 14 Gray, Sec. 33-10s-12w, 88 ft. W and 30 ft. S of No. 4 ..... Heaving shale 3,958 ft.; set whipstock 2,320 ft.; milling out.

Vinton Pet. Co.'s No. 5 Matilda Gray (D.D.), 456 ft. W and 42 ft. N. SE cor SW NE, Sec. 33-10s-12w ..... Standing 3,684 ft.

Wilson-Broach's No. 2 Wilson (W.O.), 280 ft. N and 126 ft. E of SW cor. SE NE of Sec. 33-10s-12w ..... Coring sand 3,012 ft.

GUEYDAN—VERMILLION PARISH

Pure Oil Co.'s No. 3 Alliance Trust Co., 695 ft. from N line and 1,460 ft. from W line of Sec. 34-11s-1w ..... Drlg. sandy shale 1,233 ft.

HACKBERRY—CAMERON PARISH

Calcasieu Oil Co.'s No. 37 Watkins, 776 ft. N and 2,267 ft. W of SE cor. of Sec. 13-12s-10w ..... Lime rock 3,187 ft.

Wilfred Lahaye's No. 1 Olevia, Sec. 36-12s-10w, in 2-acre tract ..... Spudded and shut down.

Lackawanna Oil Co.'s No. 1 Ellender, 320 ft. S and 150 ft. E of NW cor. of SE SE of Sec. 21-12s-10w ..... Derrick.

J. G. Sutton's No. 9 Irwin, 1,520 ft. N and 1,045 ft. W of SE cor. of Sec. 13-12s-10w ..... Derrick.

Union Sulphur Co.'s No. 2 Gulf Land-...ure lease, 1,958 ft. N and 200 ft. W of SE cor. of Sec. 11-12s-10w ... Rigging.

Union Sulphur Co.'s No. 3 Gulf Land-Humble lease, 711 ft. N and 430 ft. W, SE cor., Sec. 11-12s-10w..... Set 26 ft. of 4½-in. screen 6,003 ft.; comp. flowing 1,392 bbls., ¾-in. choke, 1,240 lbs. on tubing.

Yount Lee Oil Co.'s No. 11 School land, 2,810 ft. W and 1,608 ft. N, SE cor., Sec. 15-12s-10w ..... Drlg. 5,465 ft.

CHOCTAW—IBERVILLE PARISH

Standard Oil Co.'s No. 3 Myrtle Grove, Sec. 52-9s-11e, 400 ft. S and 50 ft. W of No. 1 ..... Oil sand 2,025 ft.

WHITE CASTLE—IBERVILLE PARISH

Shell Pet. Corp.'s No. 6 Wilbert, Sec. 9-11s-12e, 200 ft. out from No. 5 ..... Drlg. sandy shale 3,875 ft.

LEESVILLE—LA FOURCHE PARISH

The Texas Company's No. 5 L.L.&E., 3,888 ft. S and 105 ft. E of NW cor. of Sec. 26-21s-22e ..... Salt 4,107-4,177 ft.; plugged to oil sand 4,027 ft.; cleaning hole to reset screen.

PORT BARRE—ST. LANDRY PARISH

Port Barre Oil Co.'s No. 1 Sibille (W.O.), Sec. 20-6n-5e, 600 ft. S and 124 ft. E, NW cor. of 30-ac. tr. .... Standing 3,494 ft.

STARKS—CALCASIEU PARISH

Emerson & Stark's No. 2 Industrial, 400 ft. S of No. 1, in SE cor. NE NW, Sec. 30-9s-12w..... Drlg. gumbo 4,150 ft.

Gulf Ref. Co.'s No. 31 Lutcher-Moore, Sec. 19-9s-12w, 500 ft. E of No. 15 ..... Drlg. sand rock 3,185 ft.

SWEET LAKE—CAMERON PARISH

Pure Oil Co.'s No. 11 Yount Lee, Sec. 12-13s-8w, 800 ft. S 66 deg. 42 min. from No. 9 ..... Drlg. hard sand and lime 1,244 ft.

TEXAS

MISCELLANEOUS WILDCATS

AUSTIN COUNTY

Great Southern Oil Co.'s No. 1 Schevojsa, 329 ft. N, 78° E of N cor. B. Dottery Sur. ..... S.D. 2,848 ft.

BRAZORIA COUNTY

Danciger O. & R. Co.'s No. 1 W. C. Hunt, Pledger, 5,220 ft. from the N line and 6,500 ft. from E line of W. Colrson Sur. ..... Drlg. water sand 5,502 ft.

John Deering's No. 1 C. W. Chapman, 294 ft. from S line and 104 ft. from E line of Lot 2, Andrew Robinson Sur. ..... Drlg. sticky shale 5,180 ft.

Gulf Prod. Co.'s No. 1-B H. P. Lockwood, Wiley Martin Sur. No. 9, 3,024 varas S, 45° W along SE line of Lockwood 536-acre tract from E cor., thence 241 varas NW at right angles from said line ..... Spudded.

A. D. Parsons et al's No. 1 Hughes, 1,500 varas, NE from W cor. along NW line of A. L. D. Lewis Sur., and 200 varas SE at right angles in Hughes 320-acre tract ..... Drlg. gumbo 1,650 ft.

Shell Pet. Corp.'s No. 5 Blakely-Winston, Danbury, 1,410 ft. N 63° and 1,200 ft. N 27° W of SW cor. of H.T.&B. Sur. No. 14 ..... Drlg. hard shale and lime 4,164 ft.

Tri-fin Oil Co.'s No. 1 Moers, 1,635 ft. southwest of Chocolate Bayou and 693 ft. SE of NW line of F. Moore Sur. ..... Shut down 2,105 ft.

BURLESON COUNTY

Sail & Knob's No. 1 Polansky, M. B. Lawrence Sur., 359 ft. from E line and 469 ft. from N line of 158-ac. tr. ..... No report.

S. M. Bracey et al's No. 1 Bracey, J. Lastly Sur., 880 ft. from E cor. of P. Taylor 110 acres, SE along NE line of J. G. Houston 160 acres, thence 180 ft. at right angles in 3-acre tract ..... No report.

Sampson Oil & Gas Co.'s No. 3 Duckworth & Gilley, P. Singleton Sur., 50 ft. SE of No. 1 ..... Rig.

J. E. Stubblefield et al's No. 1 Mitchell, A. T. Woolridge Sur., 81 ft. SW and 4,340 ft. SE of S cor. of Joseph Henson Sur. ..... Gumbo 600 ft.; standing

COLORADO COUNTY

Bunte and Shell Pet. Corp.'s No. 1 Rudolph Matuska, Joshua Kenneke Sur., 700 ft. S of most northerly NW cor. in C E and W of 130-acre tract ..... Drlg. shale and lime 4,220 ft.

Smith, Adair et al's No. 1 Barnett, 230 ft. from W line and 330 ft. from S line of Blk. 26, Q. K. Winn Sur.... Black shale 4,345 ft.; s'detracked at 1,850 ft.; drlg. shale and lime 3,280 ft.

FORT BEND COUNTY

Lowrie & Young's No. 1 Jackson Brown, ...liant Lake, Wm. Barrett & Abner Harris Sur., 150 ft. out of SW cor. of Brown 1,000-acre tract ..... Moving in rig.

Lynch et al's No. 1 Kneitz, 690 ft. from NW line and 350 ft. from SW line of Sec. 43, H.&T.C. Sur. ..... Shut down for repairs 672 ft.

Magnolia Pet. Co.'s No. 1 Hampil, H. Christman Sur., 1,242 ft. N and 285 ft. W from SW cor. of J. W. Slavin 28 acres ..... Drlg. sandy shale 2,637 ft.

Naylor & DeCosta's No. 1 Naylor, 6,350 ft. N, 55 deg. E from SW cor. 453-acre tract in Christman Sur ... Drlg. hard sand and shale 6,521 ft.

North Star Pet. Co.'s No. 1 Guyler, Andrew Roberts Sur., 330 ft. out of SW cor. of 100-acre tract ..... Shut down 4,005 ft.

Paul & Gerke's No. 1 Krenek, Gale Borden Sur., 150 ft. out of NW cor. of tract ..... Derrick.

GALVESTON COUNTY

Humble Oil & Ref. Co.'s No. 1 Rosenkranz, Green's Bayou, center N half of Lot 10, Sarah White Sur..... Drlg. shale 5,041 ft.

GRIMES COUNTY

Barnett et al's No. 1 Dodd, Timothy Jones Sur. ..... Shut down 2,689 ft.

W. J. Brightwell's No. 1 Combs, Samuel Beauman Sur., 350 ft. from S line and 622 ft. E of extreme W line of 276-acre tract ..... Drlg. hard brown shale 3,242 ft.

Petroleum Southwestern Corp.'s No. 1 Greer Bros. Pat B. O'Connor Sur., 450 ft. S and 200 ft. E of SW cor. of 63-acre tract ..... Derrick.

HARDIN COUNTY

Gulf Prod. Co.'s No. 1 Kirby, Ariola, 330 ft. out of SE cor. of 100-ac. tract, Ariola Sur. ..... Drlg. sticky shale 3,793 ft.

Houston Oil Co.'s No. 1-X Ariola fee, 3,000 ft. from N line and 5,610 ft. from W line of Ariola Sur. ..... Drlg. salt 4,267 ft.; top of salt 4,267 ft.

Houston Oil Co.'s No. 1-Y Ariola fee, 5,610 ft. from W line and 5,610 ft. from N line of Ariola Sur. ..... Derrick.

Houston Oil Co.'s No. 1-Z Ariola fee, 3,000 ft. from W line and 5,610 ft. from N line of Ariola Sur. ..... Drlg. sandy shale 2,255 ft.

Chas. Taggi's No. 1 Hooks, 200 ft. out of NW cor. of Wm. Slade Sur. ..... Gumbo 1,650 ft.

Joe E. Proctor's No. 1 Russell & Teagle, 3,650 ft. E and 2,777 ft. N of NW cor. of Wm. W. Young Sur. .... No report.

Republic Prod. Co.'s No. 2 Ariola fee, Ariola Sur., 660 ft. due E of Gulf's No. 1-A Kirby ..... Coring sand 2,566 ft.

Republic Prod. Co.'s No. 3 Ariola fee, Ariola Sur., 660 ft. due S of Gulf's No. 1-A Kirby ..... Derrick.

Republic Prod. Co.'s No. 1 Ben Andrews fee, 1,140 ft. W of Neches River and 345 ft. N at right angles in Van Meter Sur. ..... Drlg. shale and boulders 2,845 ft.

HARRIS COUNTY

T. V. Buckhoive & Sons' No. 1 Miller, Arthur McCormick Sur. ..... No report.

Cherry & Pritchard's No. 1 Dr. Griffith, S. Bell Sur., 582 ft. from E line and 60 ft. from N line of 250-acre tract ..... T.D. 756 ft.; cmtd. 10-in. csg. 65 ft.

John Deering's No. 1 Warren, Hockley T. Snell Sur., 100 ft. due south of The Texas Co.'s No. 3 Warren.. S.D. 2,411 ft.

Koinm Prod. Co.'s No. 1 Burt & Griffith, 2,100 ft. W of E line of A. R. Bowman Sur. and 2,600 ft. S of Spring Creek ..... No report.

E. D. Morse et al's No. 1 Schiveinie, Wm. White Sur., 900 ft. S 80° W of NW cor. of Lienberger 20-ac. tract in Blk. 1 ..... Drlg. shale 4,575 ft.

John R. Turn...ull's No. 1 Laureman, 569 varas E and 315 varas S of NW cor. of W. B. Bissonett Sur. ..... Drlg. S.W. sand 5,516 ft.

JASPER COUNTY

Gulf Prod. Co.'s No. 1 Miller Vidor, 2,893 ft. S and 112 ft. E of NW cor. of Sarah Gray Sur. ..... Drlg. gumbo 1,904 ft.

Houston Oil Co.'s No. 1 Richardson fee, 2,000 ft. S and 3,003 ft. W of NE cor. of Ben Richardson Sur. ..... Drlg. shale 1,135 ft.

P. Michael et al's No. 1 Eck, G.C.&S.F. Sur., 502 ft. from N line and 497 ft from E line of tr. ..... Shut down 1,706 ft.

Smitherman, Neilson & Noble's No. 1 Cameron, SE cor. of Cameron Lbr. Co. tract, Wm. Jones Sur. ..... Moving in.

JEFFERSON COUNTY

Coastal Oil Co.'s No. 1 Young, 250 ft. from E line and 160 ft. from S line of 40-acre tract in Blk. F-5, Lot 6, Joseph Grigsby Sur. ..... Drlg. gumbo 2,596 ft.

Elam & Pipkin's No. 2 Broussard, John McGaffey Sur., 150 ft. due E of No. 1 ..... Shut down 1,855 ft.

Jack Schultz' No. 2 Todd, Cheek, 1,800 ft. S of No. 1 and 130 ft. E of W line of Wm. Carr Sur. ..... Cmtd. 9⅝-in. csg. 4,034 ft.

LIBERTY COUNTY

Leon Brisley's No. 1 J. M. Neal, Edward Tanner Sur., 1,800 ft. E, 1,300 ft. N of most westerly NW cor. of Margaret Evans Sur. ..... Drlg. sand and shale 2,702 ft.

Mayes et al's No. 1 Dunman, J. C. Martin Sur., 1,111 ft. from S line of survey and 2,360 ft. W of Trinity River ..... Rig.

MATAGORDA COUNTY

Danciger O. & R. Co.'s No. 1 Turner, 4,900 ft. from NE line and 3,800 ft. from SE line of M. Cummings Sur. ..... Surface clay 30 ft.; derrick down

Dr. Griffith et al's No. 3 Baer, Big Hill, 5,000 ft. N, 3,000 ft. E from SW cor. of Seth Ingram Sur ..... Standing 2,720 ft.

Rugeley et al's No. 1 Cleveland, E. Hall Sur., 450 ft. E of Cottonwood Creek and 200 ft. N of S line of 60-acre tract ..... No report.

MONTGOMERY COUNTY

Miller Prod. Co.'s No. 1 Foster Lbr. Co., M. B. Lawrence Sur., 2,640 ft. from N line and 300 ft. from E line of 412-acre tract ..... Shut down 4,020 ft.

Rheubotham et al's No. 1 A. H. Salis, Wm. Barker Sur., 390 ft. from E line and 400 ft. from N line of W 36 acres of Salis tract ..... Spudded.

Sutton-Hawkins' No. 1 Foster, Rosea de la Garza Sur., 3,333 ft. N and 1,320 ft. E of NE cor. of W. J. Johnson 100-ac. tract ..... Coring shale 4,468 ft.

NEWTON COUNTY

L. A. James et al's No. 1 Price, T.&N.O. Sur., 1,000 ft. from W line and 500 ft. from N line of tract ..... Drlg. sand and shale 1,700 ft.

Sun Oil Co.'s No. 1 Peevey Moore Lbr. Co., 2,145 ft. from S line and 1,225 ft. from W line of F. Stoevar Sur. No. 4 ..... Drlg. shale 6,096 ft.

POLK COUNTY

Anderson et al's No. 1 Duke, Peter J. Manard Sur., 330 ft. out of NW cor. of 235-acre tract ..... Cmtd. 10-in. csg. 755 ft.; standing.

Koch & Stevens' No. 1 Ruth Lawrence, Castillian Sur., 300 ft. from W line and 790 ft. from S line of 54-acre tract ..... Drlg. shale and lime 1,825 ft.

Dick Schwabb's No. 1 Carlton Davis, A. Viesca Sur., 350 ft. out of most northerly SE cor. A. E. Munson 101-acre tract ..... Broken sand and shale 4,181-4,266 ft.; cmtd. 6⅝-in. csg. 4,175 ft.; drlg. plug.

Tony & Purdy's No. 1 Martha Roberts, Joaquin T. De Rumayor Sur. ..... Drlg. sand 1,546 ft.

G. A. Williams et al's No. 1 Carlton-Davis, 300 ft. E and N out of SW cor. of L&G.N. Sur. No. 52 in 55-ac. tr. ..... Dry and abnd. 4,017 ft.

REFUGIO COUNTY

Humble Oil & Ref. Co.'s No. 3 O'Connor, Florentine Rice Sur., 13,757 ft. from S line at right angles and 3,412 ft. from E line at right angles of 5,545-acre ranch ..... Drlg. shale 1,380 ft.

SAN JACINTO COUNTY

Geo. L. Pace and Ed. C. Lawson's No. 1 Delta Land & Lbr. Co., H.&T.C. Sur. No. 3, 2,640 ft. from E line and 1,940 ft. from S line of Sur. ..... Drlg. sandy shale 4,047 ft.

Weaver et al's No. 1 Delta Land & Timber Co., 1,400 ft. NE of SW line of James W. Robertson Sur., and 800 ft. at right angles ..... Derrick.

TYLER COUNTY

Allied Pet. Co.'s No. 3 Wilson, 1,500 varas from W line and 600 varas from N line of Mrs. E. Cheny Sur., Abst. 798 ..... T.D. 5,146 ft.; junked and abnd.

VICTORIA COUNTY

Houston Oil Co. and Magnolia Pet. Co.'s No. 1 Beck, I.R.R. Sur. No. 26, 1,000 ft. NE along NW line from most westerly west cor. of Lot D and 600 ft. SE at right angles ..... Derrick.

Humble Oil & Ref. Co.'s No. 1 Pete Rydolph, John Kemper Sur., 2,617 ft. from E line and 1,013 ft. from W line of lease ..... Drlg. shale 6,445 ft.

Slick-Seeligson Corp.'s No. 2 McFaddin (D.D.), J. Varian Sur., 1,100 ft. NE of SW line and 635 ft. E of railroad ..... No report.

The Texas Company's No. 3 McFaddin (W.O.), S 15° W 6,200 ft., N 75° W 1,850 ft. from NE cor. John M. Rine Sur. ..... Abnd. 6,947 ft.

Union Oil Co.'s No. 2 Keeran, Martin DeLeon Sur., 500 ft. E of E line of Gulf lease and 1,900 ft. N of railroad ..... Derrick.

WALKER COUNTY

W. E. Brown's No. 1 Horshall, 150 ft. out of SE cor. of E. Miller Sur. ..... Shut down 3,600 ft.; to drop from report.

Hart Oil Co.'s No. 1 Thompson Lbr. Co., Jose Ortega Sur., 1,265 ft. S, 1,876 ft. W of SW cor. of J. B. Gibson's 71-acre tract ..... Abnd. 2,090 ft.

WALLER COUNTY

Bancho Oil Co. and Jim Oil Co.'s No. 1 Joe W. Harris, 3,000 ft. from E line and 5,000 ft. from N line of H.&T.C. Sur. in Harris 1,475-acre lease in Justo Liendo Sur. ..... Shut down 2,950 ft.

Birdwell et al's No. 1 Robertson, John Baker Sur., 1,625 ft. from S line and 450 ft. from W line of 64-acre tract ..... Derrick.

WASHINGTON COUNTY

M.O.&T. Corp.'s No. 1 Giddings, S. Young Sur., 200 ft. from S line and 150 ft. from W line of 698-acre tract ..... Shut down 65 ft.

WHARTON COUNTY

Gantt et al's No. 1 Laura Hahn, N. Manch Sur., 330 ft. out of NE cor. 142.17-ac. tract ..... Shut down 3,315 ft.

Smith & Daniels' No. 1 Mitchell, H.&T.C. Sur. No. 8, 330 from NE line of NE 80-acre tract in C of tract NW and SE ..... Coring sand 3,692 ft.

SOUTH LOUISIANA

BEAUREGARD PARISH

DeRidder Dev. Co.'s No. 1 McMahon, 200 ft. W and 150 ft. S of NE cor. of NW of Sec. 33-3s-9w ..... Standing 1,288 ft.

CALCASIEU PARISH

Cannon & Hughes' No. 1 J. S. Reed, Sec. 18-10s-12w... Derrick.

I. R. Irvine et al's No. 1 A. D. Mimms, 741 ft. N and 741 ft. W of SE cor. SE NE, Sec. 20-9s-7w..... Shut down 745 ft.

JEFFERSON DAVIS PARISH

S. D. Finly's No. 1 Clarphy Lognion, SW NW of Sec. 23-10n-4w ..... Derrick.

PLAQUEMINES PARISH

Lake Washington-Freeport Sulphur Co.'s No. 3 Cockrell-Moran, 5,100 ft. E and 1,000 ft. S of Washington Station, Sec. 14-20s-26e ..... Sulphur test.

Lake Washington-Freeport Sulphur Co.'s No. 5 Cockrell-Moran, 5,200 ft. E and 850 ft. N of Washington Station, Sec. 14-20s ..... Sulphur test.

The Texas Co.'s No. 5 Garden Island Bay, 2,180 ft. W and 1,750 ft. S, NE cor., Sec. 107-23s-32e..... Blew out 801 ft.

TERREBONNE PARISH

The Texas Company's No. 6 State-Dog Lake, 3,230 ft. W and 908 ft. N of SE cor. of Sec. 31-21s-16e ..... Drlg. sand 2,400 ft.

The Texas Company's No. 7 State-Lake Pelto, 2,216 ft. N, 104 ft. W of SE cor., Sec. 8-23s-18e ..... Drlg. broken cap rock 1,925 ft.

The Texas Company's No. 17 State-Lake Barre, 1,476 ft. W and 626 ft. S of NW cor. of Sec. 20-21s-20e ..... Rock 2,979 ft.

The Texas Company's No. 4 Lake Barre-L.L.&E., 3,803 ft. S and 2,075 ft. W of NW cor. of Sec. 30-21s-20e in Sec. 36-21s-19e ..... Derrick.

VERNON PARISH

Minerals Division Ilano Co.'s No. 1 Llano Del Rio, 543 ft. E and 300 ft. S of NW cor. of NW of Sec. 34-3n-9w ..... Shut down 1,715 ft.

Wildcat Operations in Southwest Texas

(Continued from Page 56)

J. Stanley Smith's No. 1 Weiss, 3,096 ft. E of E line of Sec. 1, Ragsley Subd., and 390 ft. from N line of Uranga grant ..... T.D. 4,600 ft.; drlg.

BELL COUNTY

Alex Krause' No. 1 W. P. Edds, 650 ft. from S line, 150 ft. from W line of 100-acre tract in M. Moreno Sur. ..... T.D. 712 ft.; S.D.

James Scoggins' No. 2 Warrick, Ingram Sur. ..... T.D. 1,432 ft.; cleaning out.

BEXAR COUNTY

Amsden-Ingersoll-Miller's No. 1 Strumberg, 450 ft. to W line, 1,020 ft. to N line of tract, 12 miles SW of San Antonio ..... T.D. 1,054 ft.; standing

S. W. Blount's No. 1-A S. A. Land & Dev. Co., 10 ft. from No. 1 in I. Peres Sur. ..... T.D. 965 ft.; moving in rotary

Robert C. Hill's No. 1 Schell, 1,300 ft. from N line, 1,100 ft. from W line of 161-ac. tract in Sec. 234, Perretaux Sur. ..... Drlg. 830 ft.; in rock.

Rollin V. Hill, Sr.'s No. 1 Max Boeck, 1,700 ft. from N line, 2,700 ft. from E line of tract in J. R. Shepherd Sur. ..... T.D. 150 ft.; S.D. acct. rain.

Kistler's No. 1 Emma Pierce, 1,550 ft. from NW cor. and 350 ft. SE of SW lines of 49¼ acres in Cortaris Sur. No. 1 ..... T.D. 1,510 ft.; abnd.

Dr. Ewell Neil's No. 1 J. Watson, 500 ft. from W line, 1,700 ft. from S line of B. Martinez Sur. ..... T.D. 2,495 ft.; in Edwards dry

Jones & Voltz' No. 1 Bonkowsky, 150 ft. to N and W lines of William McMenenes Sur., 12 miles E of San Antonio ..... T.D. 907 ft.; standing

Schneider, Rees et al's No. 2 Claussen, 12 miles NE of San Antonio ..... T.D. 1,330 ft.; S.D.

M. E. Trussell's No. 1 L. B. Carruthers, Sr., 2,000 ft. from W line, 400 ft. from most easterly N line of tract in Sam McCullough Sur. ..... T.D. 896 ft.; standing.

BLANCO COUNTY

Hardy Sitton's No. 1 Luders, 150 ft. from S line, 1,420 ft. from E line of James Stanford Sur. ..... T.D. 1,540 ft.; standing.

BROOKS COUNTY

M. P. Evans' No. 1 J. M. Martinez, 200 ft. from N and W lines of Blk. 11, Sec. 6, La Encantada Sur. ..... T.D. 1,480 ft.; standing

CALDWELL COUNTY

Cargill et al's No. 1 Dameron, 150 ft. from N and W lines of 72-5-ac. tract in Dillard Cooper Sur. ..... T.D. 1,100 ft.; standing.

E. D. Herne's No. 1 M. C. and P. W. Jeffrey 126-ac. tract, 140 ft. from N and E lines of tract in James George Sur. ..... Set surface pipe, waiting for wtr

COMAL COUNTY

Caldwell & M. Lanier's No. 1 T. J. Byler, 175 varas from W line, 370 varas from N line of 320-acre tract in H.E.&W.T. Sur., Sec. 894 ..... T.D. 890 ft.; standing.

DIMMITT COUNTY

Motes-Campbell Co.'s No. 1 Denton, 150 ft. from E line, 250 ft. from S line of Tracts 33 and 34 in Sec. 60 of Denton Colony Subd. ..... T.D. 400 ft.; waiting for csg

DUVAL COUNTY

J. E. Anderson's No. 1 Wood-Welder, 110 ft. from W line, 400 ft. from N line of Sur. No. 71 ..... T.D. 1,450 ft.; drlg.

Al Buchanan's No. 1 Foster, 990 ft. from E line, 1,520 ft. from S line of Sur. 268 ..... Location.

Buchanan & Terrell's No. 1 Duval County Ranch Co., 990 ft. to W line, 1,120 ft. to S line of Sur. No. 96.. Spudded in.

Delange & Frates' No. 1 Sevier, 1,845 ft. from N line, 2,945 ft. from W line of Sur. 213 ..... TD. 3,950 ft.; drlg.

Duggan & Smith's No. 2 Sutherland, 330 ft. from S and W lines of Sur. No. 511 ..... T.D. 1,860 ft.; drlg.

Frank Gravis' No. 3 Schallert in Sur. 255 (Palangano salt dome) ..... T.D. 1,653 ft.; drlg.

J. A. Leindecker's No. 1 G. W. Sutherland, 580 ft. from S line, 450 ft. from W line of Survey No. 182 ..... T.D. 150 ft.; drlg.

Payne & Vernon's No. 1 A. Roach, 865 ft. from E line, 45 ft. from S line of Blk. 7, Sur. No. 457 ..... Rigged up.

Plymouth Oil Co.'s No. 1 Hoffman, center of Sur. 113 .... T.D. 850 ft.; drlg.

Smith & Capps' No. 1 Peters, 330 ft. from S line, 340 ft. from W line of NE of Sur. No. 178 ..... Rigging up.

Sun Oil Co.'s No. 1 Duval County Ranch Co., 1,650 ft. to N and W lines of Sur. No. 78, or 330 ft. to S and W lines of E half of NW of Sur. No. 76 ..... Spudded in.

S.R.C. Oil Co.'s No. 1 Duval County Ranch Co., 150 ft. from N line, 4,200 ft. from W line of Sur. 109 .... Location.

FRIO COUNTY

Amerada Pet. Corp.'s No. 1 Halff & Oppenheimer, 1,200 ft. from N line, 300 ft. from E line of W. F. Halsel Sur. ..... T.D. 4,264 ft.; drlg.

GUADALUPE COUNTY

B. B. Brock's No. 1 Ogletree, 1,600 ft. from W line, 450 ft. from S line of tract in Robert Smith Sur. .... T.D. 1,890 ft.; waiting for csg.

Keene & Russell's No. 1 Lowman, 300 ft. from E line, 350 ft. from N line of tract in George Allen Sur. ...T.D. 380 ft.; resumed drlg.

H. A. Suttle's No. 1 O. J. Halm, 150 ft. from N line, 1,900 ft. from E line of 331-acre tract in J. Kent Sur. ..... T.D. 1,825 ft.; drlg.; no chalk

J. T. Stover's No. 1 Paul Hoffman, 1 mile SW of Selmar Pool ..... T.D. 1,892 ft.; resumed drlg.

F. W. Tong's No. 1 Henry Rahe, 650 ft. to SW lines, 1,300 ft. to NW lines, Moses Baker Sur. ..... Moving in machinery.

GOLIAD COUNTY

Hoffman & Gooch's No. 1 Fromme, 600 ft. from N and 1,200 ft. from W line of Peter B. Dexter Sur. ..... T.D. 2,470 ft.; standing.

GONZALES COUNTY

Edmiston & Kirby Pet. Co.'s No. 1 J. W. Ward, Jr., 300 ft. from N line, 833 ft. from W line of tract in Dan McKay Sur. ..... T.D. 1,592 ft.; standing.

E. Haenel, Jr., No. 1-A J. James 113-ac., 900 varas from E line, 300 ft. from S line of tract in M. A. Williams Sur. ..... Location.

Kirby Pet. Co. and Bennett's No. 1 Lum & Boulder, 1,100 ft. to SE lines, 100 ft. to SW lines, Russell Ward Sur. ..... Spudded in for Edwards lime test.

Dave Watson, trustee's No. 1 Cardwell, Byrd Lockhart Sur., 7 miles S Gonzales ..... Moving in tools.

HIDALGO COUNTY

Barrett-Kanellos' No. 1 J. B. Brock, 7 miles W and N from Mission (on Monte Cristo road) ..... T.D. 4,590 ft.; S.D.

Palm City Pet. Co.'s No. 1 J. T. Lomax, 7,500 ft. from S and E lines of San Roman Sur. ..... T.D. 1,445 ft.; drlg.

Dayle L. Smith's No. 3 Daskam, SW part of county ..... T.D. 1,726 ft.; S.D

JIM HOGG COUNTY

Clark & Cowden's No. 1 E. Vela, 2,500 ft. S line, 3,472 ft. to W line of Share 1 El Peyote grant ..... T.D. 3,050 ft.; S.D.

Cole Pet. Co.'s No. 1 W. Allen, 990 ft. to E line, 1,320 ft. to N line of Blk. 13, Randado grant ..... Location.

D. C. DeWitt's No. 1 Gomes, 1,110 ft. from N line, 150 ft. from W line of Sur. No. 12, SW part of county ...T.D. 1,457 ft.; to drill deeper.

Jack Tarver's No. 1 Martinez, 300 ft. from E line, 1,600 ft. from N line of Sur. No. 628 ..... T.D. 3,007 ft.; cored 7 ft.; sand showing oil; will test.

JIM WELLS COUNTY

Crawford et al's No. 1 Hoffman, 1,980 ft. N and 660 ft. W of most easterly SE cor. of Hoffman 7,000-ac. tract in La Trinidad grant ..... T.D. 3,460 ft.; drlg.

F. A. Lain's No. 1 Vernon Porter, 800 ft. from S line, 400 ft. from W line of 200-ac. tract in Sur. 25 ..... T.D. 1,953 ft.; drlg.

KARNES COUNTY

A. E. Edmiston's No. 1 O. L. Cochran, 150 ft. from S line, 500 ft. from E line of farm in D. B. McConnell Sur ..... T.D. 2,014 ft.; drlg.

H. J. Porter et al's No. 1 Ingram, 275-ac., 1,500 ft. from E line, 300 ft. from S line of tract in Carolos Martinez Sur. ..... Location.

KERR COUNTY

Evans & Gant's No. 1 Estelle Young, 150 ft. out of NW cor. of Sec. 28, E. A. Burge Sur. ..... T.D. 1,310 ft.; standing.

Verde Oil & Gas Co.'s No. 1 J. D. Witt, 1,320 ft. from N line, 1,220 ft. from W line of Sec. 1,922 in Hamilton Sur. ..... T.D. 118 ft.; standing.

KLEBERG COUNTY

H. Carter's No. 1 R. H. Simmons, 150 ft. from S and W lines of tract in Sec. 7, King Sur. No. 3 ..... T.D. 3,205 ft.; resuming drlg.

Harris et al's No. 1 Dennett, north of Kingsville Field ...Spudded in and set surface csg

LIVE OAK COUNTY

Brown & Whitting's No. 1 A. Laseter, 900 ft. from S line, 1,200 ft. from W line of tract in S. Hays Sur....T.D. 852 ft., coring.

J. H. Durbin's No. 1 Marbach, 1,900 ft. from W line, 425 ft. from SE line of tract in S. Hayes Sur. ..... T.D. 900 ft.; whipstocking

J. A. Harper's No. 1 fee, 2,130 ft. to N line, 510 ft. to E line of farm, J. Pointevant Sur. 37 ..... T.D. 1,100 ft.; set csg.

LEE COUNTY

Paton Bros.' No. 1 Turner, 150 ft. due SE of No. 1-A Turner, junked at 5,675 ft. in the David Hudson Sur., 2 miles SE from Tanglewood ..... Location.

McMULLEN COUNTY

Jaqua & Crow's No. 1 Hagist, 330 ft. from N and W lines of R. W. Mills Sur. No. 467 ..... Spudded in.

Skinner & Bailey's No. 1 Burmeister in SW cor. of Sec. 14, Blk. 1, C.H.&H. Ry. Sur. ..... Location.

MEDINA COUNTY

James E. Greenlee's No. 1 Feasler, 600 ft. from N line and 2,400 ft. from E line of L. G. Harrison Sur. No. 799 ..... T.D. 1,065 ft.; drlg.

Robertson Drilling Co.'s No. 1 Little, 2,350 ft. from N line, 1,500 ft. from E line of E. B. Rutledge Sur., southern part of county ..... T.D. 3,133 ft.; abnd.

F. Ryal's No. 1 G. Martin, 150 ft. from S and W lines of Blk. 368, H. Castro Sur. ..... Spudded in and S.D.

MILAM COUNTY

Bridwell's No. 1 Terry, 1,100 ft. from N line, 800 ft. from W line of tract in Jose Leal Sur. ..... T.D. 1,250 ft.; drlg.

M. W. Elser's No. 1 Citizen's Nat. Bank of Waco, 1,325 ft. from S line, 625 ft. from E and W lines of tract in Wm. Punchard Sur. ..... T.D. 2,125 ft.; drlg.

Glass et al's No. 1 Ellison, 700 ft. from N line, 1,350 ft. from W line of 200-acre tract in Samuel Frost Sur. ..T.D. 1,665 ft.; drlg.

Huff & Keck's No. 1 J. W. Lee, 1,200 ft. to E line, 265 ft. to S line, D. Harmon Sur. ..... T.D. 1,492 ft.; standing.

Michalk & Clark's No. 1 Johnson, 440 ft. S of No. 1 Johnson on 100-ac. lease in Juan Jose Acosta Sur. ..T.D. 2,208 ft.; S.D.

M. C. Moore et al's No. 1 H. A. Camp, east of San Gabriel ..... T.D. 1,085 ft.; drlg.

Wilder, Van Huss & Ediston's No. 1 Von Groton in M. J. Delgado Sur. ..... T.D. 2,870 ft.; drlg.

NUECES COUNTY

Carter, Kelley et al's No. 1 Harvey, 5 miles NW of Saxet Field ..... Location.

Gulf Port Oil Co.'s No. 1 Luby, 2,044 ft. from E line, 2,142 ft. from S line of John M. Luby, 531.74 acres, Blk. 1 of Mary J. Luby Share 1-G of Anna Collins Petronilla pasture, 24 miles SW from Corpus Christi ..... T.D. 1,450 ft.; drlg.

SAN PATRICIO COUNTY

Chiltipin Oil & Gas Co.'s No. 1 E. H. Welder, 1,750 ft. from N line, 660 ft. from W line of tract in Blk. 5, Portilleo Sur. ..... Location.

STARR COUNTY

Adams & Modest's No. 1 Wood, 2,070 ft. from W line of Porcion 84, Camargo, and 1,472 ft. N of Missouri Pacific Railroad ..... Derrick.

Hartshorn et al's No. 1 Hinijosa, 835 ft. W of Hebbronville road and 2,500 ft. from S line of Porcion 110.... Location.

B.&B. Oil Co.'s No. 1 Crown Brick & Tile Co., 1,800 ft. S of State Highway No. 4 and 580 ft. from W line of Porcion 87, near La Puerta ..... Rigging up.

D. H. Carpenter's No. 1 Salinas, 3,087 ft. from N line, 1,221 ft. from E line of Share 85 of partition of Porcions 38, 39, 40 in jurisdiction of Reynosa ..... T.D. 250 ft.; set csg.

W. P. Chancellor's No. 1 A. Guerra, 24,000 ft. N of SW cor. and 2,600 ft. from W line of Share 6 in the Joe Grant Sur. ..... Rigging up.

Coastal O. & G. Co.'s No. 1 Kelsey Bass, 448 ft. to N line, 150 ft. to W line of Tract 52, Sur. 2, Porcion 86..T.D. 1,700 ft.; drlg.

L. W. Connor's No. 1 Sanchez, cen. of Sur. 344 ..... Waiting on water line.

W. T. Gilman & Travelers Oil Co.'s No. 1 C. Ramos, 1,170 ft. from SW line, 1,470 ft. from NW lines of Sur. No. 150 ..... Spudded in and S.D.

H. C. Harter's No. 1 Gonzales, 990 ft. from N line, 1,150 ft. from E line of Share 62-B of Subd. of Porciones 70 and 71, Jurisdiction Mier ..... T.D. 410 ft.; standing.

Jeffries and Lambeth Drilling Co.'s No. 1 Starr County Cattle Co., 11,572 ft. from N line, 2,490 ft. from E line of Porcion 89, Jurisdiction of Camargo .. ....T.D. 600 ft.; resumed drlg.

LaJoya Oil & Gas Co., making location in Porcion 29 in NE part of county ..... Location.

Morrison et al's No. 1 V. G. Guerra, 1,980 ft. from SW line, 450 ft. from SE line of Sur. No. 23 ..... T.D. 400 ft.; drlg.

Doyno Pioneer Co.'s No. 1 Salinas, 3,087 ft. from N line, 1,230 ft. from E line of Share 85, Porcions 38, 39, 40, Reynosa grant ..... Spudded in.

John Pope, trustee's No. 2 H. Gonzales, 150 ft. W of cen. of E line of Sur. No. 339 ..... Location.

Smith et al's No. 1 Lopez, 200 ft. from E line, 1,000 ft. from S line of Blk. 20, Share 65 of Porcion 80, Jurisdiction Camargo ..... T.D. 1,515 ft.; drlg.
George Stobaugh's No. 1 Seabury et al, 150 ft. from S and W lines of Porcion 107 ..... TD. 378 ft.; no report.

TRAVIS COUNTY

E. A. Field's No. 1 B. H. Bloor, 150 ft. from S line, 500 ft. from W line of 400-ac. tract in NE part of county.. T.D. 510 ft.; drlg.
Fritz Fuchs' No. 1 Swedish, 2,350 ft. from NE line, 750 ft. from NW line of Thomas Smith Sur. ..... T.D. 1,788 ft.; S.D.

UVALDE COUNTY

J. V. Scoggin's No. 1 Olive Henry, 1,100 ft. from N and E lines of tract in Hugh Kilgore Sur. ..... Spudded in.

WEBB COUNTY

O. W. Killam's No. 1 E. Garcia, center Blk. 2, Blk. 2 Sur. 461, W from Mirando City ..... T.D. 2,145 ft.; standing.
Newton Drilling Co.'s No. 1 A. Garcia, 2,550 ft. from S line, 2,340 ft. from W line of Sur. No. 52, 2 miles SW of Carolina Texas Field ..... T.D. 2,080 ft.; drlg., shows oil

WILLIAMSON COUNTY

McLean et al's No. 2 R. C. Miller, 800 ft. to S line, 100 ft. to W line of tract in B. Manlove Sur. ..... T.D. 940 ft.; S.D.

ZAPATA COUNTY

C. B. Bunte, Inc., et al's No. 1 Gutierrez, center of S half NW Blk. 5, Jose V. Borrego grant, 8 miles NE San Ignacio ..... T.D. 1,400 ft.; drlg.
Donohoo et al's No. 1-A Garcia, 150 ft. from NE and SE lines of Blk. 7 of Subd. of 700-ac. of Share A, Charco Redondo grant ..... T.D. 1,003 ft.; no report.
Huff & Fudge's No. 1 Uribe, 150 ft. from NW and SW lines of Blk. 8, Share 7, Partition 6, San Ignacio Subd. of Borrego grant ..... T.D. 300 ft.; standing.
F. J. Ossenbeck's No. 1 Adelfonso Rameriz, 600 ft. W of Zapata-Roma highway, 150 ft. from SE line of Porcion 18 ..... Location
H. L. Sargent et al's No. 1 Antonio Gutierrez heirs, 932 ft. from W line, 472 ft. from S line of Tract 3, Blk. 5, Nixon Subd., Porcion 10, San Ignacio Borrego grant ..... T.D. 1,402 ft.; drlg.
Stevens & Pope's No. 1 Martinez, 150 ft. from S and E lines of Blk. 95, C. H. Sprague Subd. of Sur. 434 ..... T.D. 262 ft.; drlg.
Winch & Billings' No. 1 S. Benavides, 1,018 ft. from NW line, 1,107 ft. from NE line of Blk. 2 of O'Hern & Fansler Sub. of Villa grant ..... T.D. 300 ft.; drlg.

Southwest Texas Proven Areas

Week Ending October 15

NORMANNA POOL—BEE COUNTY

Company, well, farm name, section and block. Remarks:
Gulf Coast Oil Co.'s No. 5 Hicks, 600 ft. E of Nichols Oil Co.'s No. 2 Hicks ..... Derrick.
Wallace Morgan's No. 1 Scott, half mile E of Normanna Pool ..... Making location.

NORTH PETTUS POOL—BEE COUNTY

Gulf Port Oil Co.'s No. 5 McKinney, 660 ft. due NE of No. 4 ..... T.D. 3,680 ft.; comp. 100 bbls.

TULETA POOL—BEE COUNTY

O'Neil and C.R.M.'s No. 1-A Harris, 150 ft. from N and W lines of SW SE Sec. 2 of Ragsley Sub. of Uranga grant ..... T.D. 4,096 ft.; comp. 80 bbls.
Nichols and C. R. & M. Drilling Co.'s No. 2 Harris in center of Blk. 10, Sec. 13, Ragsley Subd. of Urabga grant ..... T.D. 4,114 ft.; setting csg.
The Texas Company's No. 2 Cox, 250 ft. from S and W lines of SE of SW of SW of Sec. 2, Ragsley Subd. of Uranga tract ..... Location

GAS RIDGE—BEXAR COUNTY

American Gas Co.'s No. 5 W. H. Kennon, 1,750 ft. from S line, 2,000 ft. from E line of 400-acre tract in Maria F. Rodriguez Sur. ..... T.D. 2,230 ft.; to set csg.

ECKERT POOL—BEXAR COUNTY

Alamo Nat. Gas Co.'s No. 3 J. H. Gembler, 180 ft. from N and E lines of tract in A. Manachaca Sur. 51. T.D. 1,416 ft.; drlg
C. M. Carl's No. 1 F. Gembler, 160 ft. from N line, 750 ft. from E line of tract in J. Montez Sur. ..... T.D. 825 ft.; moving in heavy rig
Gatlin Oil Co.'s No. 15 I. A. Beck, 150 ft. from S and E lines of tract in J. Montez Sur. ..... Location
W. R. Swearingen's No. 11 Halbardier, 400 ft. SE of No. 10 Halbardier, J. F. Perez Sur ..... Location.

ALTA MESA POOL—BROOKS COUNTY

Ed East's No. 3 Randolph Garcia, 1,000 ft. from S line, 200 ft. from W line of 2,161-ac. tract in La Escantada grant ..... T.D. 100 ft.; drlg

DUNLAP POOL—CALDWELL COUNTY

Bob Rose's No. 2-B Walker 46-acre tract, 360 ft. from NW line, 500 ft. from SW line of tract in Solomon Beal Sur. ..... T.D. 2,255 ft.; cleaning out.

SALT FLATS—CALDWELL COUNTY

Hickman et al's No. 1 C. A. Dickerson, 150 ft. N of con. of S line of tract in John D. Rains Sur. ..... T.D. 2,172 ft.; drlg. deeper

WEBSTER POOL—CALDWELL COUNTY

C. J. Webster Oil & Gas Co.'s No. 1 C. F. Robertson, 700 ft. from E line, 200 ft. from N line of 100-ac. tract, John A. Neill Sur. ..... Derrick

NORTH GOVERNMENT WELLS—DUVAL COUNTY

R. B. Byrd's No. 3 Wright, 660 ft. from W line, 330 ft. from N line of Sur. No. 101 ..... Location.
Central Producers, Inc.'s No. 3 Tuck & Johnson, 330 ft. from N and E lines of SE SW of Sur. No. 42 ..... Spudded in.
Hamill & Hamill's No. 2 C. W. Hahl, 330 ft. to N and W lines of N half of SE of Sur. No. 42. ..... Spudded in.
Highland Oil Co.'s No. 2 Lundvall, 330 ft. from N and W lines of S half of NE of Sur. 42 ..... Spudded in.
Luse and others' No. 1 Hahl, 330 ft. from N and W lines of NW SE Sur. 45 ..... Location.
Magnolia Petroleum Co.'s No. 9 Wendt, 330 ft. from W line, 330 ft. from S line of SE NW of Sur. 44 ..... On sand, preparing to set csg.
Magnolia Pet. Co.'s No. 10 Wendt, 330 ft. from S and E lines of NW SW of Sur. 44 ..... Rigging up.
Magnolia Pet. Co.'s No. 1 J. V. Allen, 330 ft. to N and W lines of S half of SE of Sur. 42 ..... T.D. 2,282 ft.; comp. 30 bbls. hr.
Magnolia Pet. Co.'s No. 4 J. T. Johnson, 330 ft. from N line, 990 ft. from W line of SW NE of Sur. No. 44 T.D. 2,200 ft.; drlg.
San Diego Oil Corp.'s No. 5 E. Riley, 330 ft. from S and W lines of NW NW of Sur. No. 46 ..... Location.
San Diego Oil Corp.'s No. 2 L. Bennett, 500 ft. N of No. 1, 250 ft. to W line of SE of SW of Sur. No. 44.. Spudded in.
San Diego Oil Corp.'s No. 3 O. Bennett, 330 ft. from N and W lines of NE SW, Sur. No. 44 ..... T.D. 315 ft.; drlg.
San Diego Oil Corp.'s No. 4 E. Riley, 230 ft. from N line, 550 ft. from W line of NW NW of Sur. No. 46.. Rigging up.
Southwest Drlg. Co.'s No. 4 R. Wendt, 330 ft. from N and E lines of SE SE of Sur. No. 43 ..... Location.
Seacord & Putnam's No. 1 Wendt, 150 ft. from S and E lines of NE NE of Sur. No. 44 ..... T.D. 2,100 ft.; drlg.
The Texas Co.'s No. 1 M. B. Johnson, 330 ft. from S and E lines of N half SW of Sur. 42 ..... T.D. 2,263 ft.; comp. 3,000 bbls. daily.
The Texas Co.'s No. 1 C. W. Freer, 150 ft. from S and E lines of SE NE, Sur. No. 45 ..... Location.
The Texas Co.'s No. 2 M. B. Johnson, 330 ft. from N and E lines of S half S half NW Sur. 42 ..... Location.
The Texas Co.'s No. 5 Bishop Cattle Co., 1,750 ft. from W line, 1,020 ft. from S line of Sur. 135 ..... Location.
Whisenant, Trenchard and French Oil Co.'s No. 3 Hahl, 620 ft. from S line, 250 ft. from E line of SW of SW of Sur. No. 44 ..... Location.

SOUTH GOVERNMENT WELLS POOL—DUVAL COUNTY

Humble Oil & Ref. Co.'s No. 7 Paul White, 1,320 ft. from W line, 3,630 ft. from S line of Sur. No. 58 ..... T.D. 2,306 ft.; comp. 35 bbls. hr. on choke.

COLE POOL—DUVAL COUNTY

Cole Petroleum Co.'s No. 78 Benavides, 108 ft. from SE line, 182 ft. from SW line of Blk. 8, Sur. 19 ..... T.D. 1,727 ft.; testing.
O. W. Killam's No. 23 Bruni, 50 ft. from NW and SW lines of Blk. 34, Sec. 3 of Adams Sub. of Bruni lands in the Arispe Grant Sur. ..... T.D. 2,766 ft.; drlg.
The Texas Company's No. 5 Bishop Cattle Co., 1,750 ft. from W line, 1,020 ft. from S line of Sur. No. 135.. Location.

SARNOSA POOL—DUVAL COUNTY

John F. Camp's No. 2 Well, 1,200 ft. N, 18 deg. W of No. 1 Well in Sur. No. 570 ..... T.D. 2,320 ft.; drlg.
Smith & Capps' No. 4 Duval County Ranch Co., Sur. 576.. T.D. 2,340 ft.; set csg., waiting on cement
Sun Oil Co.'s No. 2 Cuellar (Cano), 150 ft. from SW and SE lines of E¼ of Sur. No. 576. ..... Rigged up.
Thomas & Tarver, Inc.'s No. 2 Duval County Ranch Co., 660 ft. NW of No. 1 ..... Drlg. 2,654 ft.

SAL-MAR FIELD—GUADALUPE COUNTY

Sal-Mar Oil & Gas Co.'s No. 1 Hempel, 1,600 ft. from S line, 150 ft. from E line of tract in G. W. Williams Sur. ..... T.D. 2,177 ft.; drlg.
George E. Smith's No. 1 Behring, 1,250 ft. from E line, 150 ft. from N line of G. W. Williams Sur. .... T.D. 2,362 ft.; abnd.
Geo. E. Smith's No. 2 Behring, 300 ft. E of No. 1 Behring. T.D. 2,018 ft.; set csg. at 2,000 ft.
A. W. Wormser's No. 1 Harris, 150 ft. from N line of tract and 150 ft. E of creek in Green Dewitt Sur.... Derrick.

HORD'S CREEK—GOLIAD COUNTY

Slick-Seeligson, Inc.'s No. 1 Kaufman, 660 ft. from SE line, 330 ft. from SW line of 4,265-ac. tract ..... Drlg. 3,130 ft.

SLICK POOL—GOLIAD COUNTY

Slick-Seeligson's No. 2 Poetter, 330 ft. to SE and SW lines, 1,200 ft. SW of No. 1, Obid Marshall Sur. ..... Spudded in.

SANDIA POOL—JIM WELLS COUNTY

Hughes and Long's No. 1 Wade, center of Blk 2 of Wade Ranch Sub. ..... Spudded in.
Larcro Gas & Pet. Co.'s No. 3 Wade, 2,000 ft. S, 33 deg. W of No. 2 Wade, thence 1,970 ft. N, 57 deg. W ..... Material on ground.

JACOB POOL—McMULLEN COUNTY

Jacob, Buzzini & Pickett's No. 6-A Jacob, 1,320 ft. S, 15° W of No. 3-A ..... T.D. 970 ft.; comp. 100 bbls
Jacob, Buzzini & Pickett's No. 7-A, W. H. Jacob, Sur. No. 10, W. H. Jacob ..... T.D. 400 ft.; drlg
F. B. Lefevre's No. 1 Leonard Jacob, 8,107 ft. S, 51 deg. W of E cor. and 1,697 ft. N, 39 deg. W, of SE line of W. D. Benham Sur. ..... Location.
Longhorn Oil Co. and American Gas Co.'s No. 1 Lark, 2,790 ft. from N line, 1,150 ft. from W line of Lark tract, E.W.B. Scrugham Sur. ..... T.D. 1,007 ft.; bailing.

WENTZ POOL—McMULLEN COUNTY

V. G. Schimmel's No. 2 Two Rivers Ranch Co., 100 ft. E of No. 1 ..... T.D. 773 ft.; blew out, skidding rig.
V. G. Schimmel's No. 1 Wolfe, 400 ft. from E line, 360 ft. from N line of Sur. 65 ..... Moving in.

ADAMS FIELD—MEDINA COUNTY

Yantis Oil Co.'s No. 1-A Adams, 50 ft. from No. 1 ..... T.D. 200 ft.; drlg.

SAXET FIELD—NUECES COUNTY

Houston Oil Co.'s No. 1 Walton, 170 ft. from N line, 220 ft. from E line of 500-ac. tract ..... T.D. 444 ft.; set surface csg.
Gulf Coast Oil Co.'s No. 2 Perkins & Gasse, 650 ft. from N line, 990 ft. from E line of Sec. 26 of Shepherd farm lots ..... T.D. 4,887 ft.; drlg. in.
Gulf Coast Oil Co.'s No. 2 Bliss, 660 ft. W of No. 1 Bliss.. T.D. 4,759 ft.; set csg.
Gulf Coast Oil Co.'s No. 1 W. L. Dinn, 330 ft. from N and E lines of lease in School Sur. No. 412 ..... T.D. 4,483 ft.; drlg.
Oso Drillers, Inc.'s No. 3 Roark, midway between Nos. 1 and 2 ..... T.D. 4,887 ft.; setting csg.
Saxet Oil Co.'s No. 9 Dunn, 180 ft. from N line, 164 ft. from W line of lease, south offset to Oso Drillers' No. 2 Roark ..... Derrick.

LOS OLMOS POOL—STARR COUNTY

V. V. Combs' No. 1 Kelsey Bass, 150 ft. from N and W lines of NE NE, Sec. 6, Porciones 75, 76 and 77 ..... Location
Frank Doyno's No. 1 Seabury, 450 ft. from S line, 815 ft. from E line of 80-ac. tract in Share 5, of W portion of Porcion 75 ..... T.D. 385 ft.; drlg
Los Olmos Oil & Gas Co.'s No. 26 Kelsey Bass, in NW SE of Sur. 7, Sub. of Porcions 75, 76, 77, Jurisdiction of Camargo ..... Spudded in
R. A. Mitchell's No. 1 Kelsey Bass, 150 ft. from S and W lines of NW SE of Sur. 8, Sub. Porcions 75, 76, 77, Jurisdiction of Camargo ..... Location
J. P. Moore and C. B. Van Matre's No. 1 Seabury et al, 150 ft. from E line, 750 ft. from S line of Share 5, Subd. of W part of Porcion 75 ..... T.D. 50 ft.; drlg
Munday Bros.' No. 1 Seabury, 840 ft. from E line, 4,550 ft. from S line of Share 5, Subd. of W two-thirds of Porcion 75, Jurisdiction of Camargo ..... Rigging up
Tarver & Nance, Inc.'s No. 6 Kelsey Bass, 750 ft. from W line, 150 ft. from S line of SW SE of Sur. 7, Porcions 75, 76, 77 of Camargo Sur. ..... T.D. 250 ft.; drlg
Tollen, Floyd & Warner's No. 1 Seabury, 450 ft. from S line, 814 ft. from E line of 80-ac. tract in Share 5, W part of Porcion 75 ..... T.D. 265 ft.; drlg

RIO GRANDE CITY POOL—STARR COUNTY

Allison & Doyle's No. 1 Salines, 150 ft. to N and E lines of Blk. 2, Share 15-B, Porcions 80 and 81, Camargo.. Location
Mundy and others' No. 1 Salines, 190 ft. to S and W lines of Blk. 12, Share C-38, Porcions 80 and 81, Camargo ..... Location
Meyers & McCaghren's No. 2-A Frank Doyno, 500 ft. to S line, 768 ft. to W line of Blk. 4, Share A-77, Porcions 80 and 81 ..... Rigging up
S. S. Smith's No. 1 O'Meara in Share 76 in W half of Porcion 79, Jurisdiction Camargo ..... T.D. 1,650 ft.; no report.

LAUREL POOL—WEBB COUNTY

Montex Oil Co.'s No. 1 M. Vela, 479 ft. from N line, 490 ft. from W line of Blk. 4, Sur. No. 267 ..... Spudded in.
South Texas Oil Co.'s No. 1 Laurel, 44 ft. from N line, 150 ft. from W line of Blk. 10, Sur. 270 ..... T.D. 500 ft.; drlg.

CHARCO REDONDO POOL—ZAPATA COUNTY

L. G. Smith's No. 1 J. M. Martinez, 350 ft. from NE and SE lines of Blk. 18, Share B, Dunke's Subd. of Charco Redondo grant ..... Abnd. location.
Windsor Oil Co.'s No. 1 Martinez, in NE of Blk. 15, of W. R. Duke Subd., Charco Redondo grant ..... T.D. 1,470 ft.; drlg.

ESCOBAS POOL—ZAPATA COUNTY

Allied Oil & Gas Co.'s No. 12 Gutierrez, 3,663 ft. from SE lines, 750 ft. from NE lines of Share 4, Comitas grant ..... T.D. 100 ft.; resumed drlg.

MARTINEZ POOL—ZAPATA COUNTY

H. Muckelroy, Jr.'s No. 1 A. Trevino, 150 ft. from S and E lines of Blk. 10, Sur. No. 411 ..... T.D. 1,650 ft.; drlg.

Wildcat Operations in Louisiana-Arkansas

(Continued from Page 54)

Walters-Nicholson, tr.'s No. 1 Jim Guy, Sec. 3-11-13.... W.O.S.R.; 1,800 ft. oil in hole 2,767 ft.
Warren & Craig's No. 1 J. A. Wagner, 150 ft. S and W, from C, Sec. 5-12-14 ..... Rigging up.
Jack Whitson's No. 1 Sanders, 330 ft. N and E, SW cor., Sec. 19-11-13 ..... Testing 1,467 ft.

GRANT PARISH

O. Robichaux's No. 1 T. M. Bradford, 1,870 ft. E, 314 ft. S, NW cor., Sec. 16-9n-1e ..... Derrick.

JACKSON PARISH

Hodge-Hunt Lbr. Co.'s No. 4 fee, SW SW, Sec. 19-15-3w Dry and abd. 2,650 ft.

MOREHOUSE PARISH

Feazel & Kalil's No. 1 Davenport, Sec. 25-21-4e ..... S.D. 2,510 ft.
H. W. Snowden's No. 1 Meyers, 330 ft. S and E, SW cor. NE NE, Sec. 15-22-7e ..... Derrick.

NATCHITOCHES PARISH

W. M. Coates' No. 1 Ross Olive, Sec. 10-9-10, 660 ft. S and E from cen. of Sec. ..... S.D. 2,010 ft.
Dr. H. S. Gerson's No. 1 Smith, Sec. 11-10-8, 2,000 ft. N, NE cor. of irregular Sec. 10, in Sec. 11 ..... T.A. 1,875 ft.
Dr. H. S. Gerson's No. 3 Smith, approximately 1,000 ft. N of NE cor. of irregular Section 10, Sec. 11-10n-8w Drlg. rock 355 ft.
J. B. Oil Co.'s No. 1 Hankins et al, Sec. 67-10-7 ..... Rigging up.
R. A. Keaton's No. 1 Bastrop State Bank, 200 ft. N and W, SE cor. NE NW, Sec. 17-10-6 ..... Location.
R. A. Keaton's No. 1 Stephens, Sec. 25-10-6, 330 ft. N and W. SE cor. NW NW ..... S.D. 1,700 ft.
Natchitoches Pet. Co.'s No. 1 Edenborn, 2,240 ft. W, 1,320 ft. S, NE cor., Sec. 4-11-6w ..... Drlg. 1,965 ft.
E. W. Perritt's No. 1 Cook, 165 ft. E, 105 ft. N, SW cor. NE SW, Sec. 3-8-9 ..... S.D. 2,993 ft.
Sabine Bayou Dev. Co.'s No. 1,130 Caw, 330 ft. N and E, SW cor. SE, Sec. 9-12-5 ..... Drlg. 1,985 ft.
Texana Oil Co.'s No. 1 Clark-Morris Lbr. Co., 878 ft. N, 560 ft. E, C, Sec. 23-5-6 ..... S.D. 3,475 ft.

OUACHITA PARISH

Monroe Oil & Royalties Co.'s No. 1 Thieler, 150 ft. N and E, SW cor. SE NW, Sec. 24-18-2e ..... Drlg. 2,325 ft.
Wilson & Mitchell's No. 1 Williams, Sec. 5-16-1e, 330 ft. E, 240 ft. S, NW cor. SW SE ..... S.D. 3,480 ft.

RED RIVER PARISH

Edward & Clay's No. 1 Delta Pecan Co., 1,600 ft. N, 450 ft. E, SW cor., Sec. 27-13-11 ..... S.D. for fuel 400 ft.
Lawrence Decker, tr.'s No. 1 Madden, 1,650 ft. S and W, NE cor., Sec. 31-14-10 ..... Coring 2,783 ft.

RICHLAND PARISH

National Gas Co.'s No. 1 Singletary, 1,980 ft. N, 660 ft. W, SE cor., Sec. 26-18n-7e ..... Dry and abd. 2,515 ft.

SABINE PARISH

Adams & Roberson's No. 1 Peterson, 406 ft. N, 200 ft. W SE cor. NE NE, Sec. 35-8-13 ..... S.D. 100 ft.
Bridwell O. & G. Co.'s No. 1 Stille, 200 ft. S and W, NE cor. SW NE, Sec. 16-7-11 ..... Rigging up.
J. M. Bridges' No. 1 Moore, 660 ft. E, 330 ft. N, SW cor. NE NW, Sec. 5-9-12 ..... Comp. flowing 20 bbls. 3,277 ft.
R. E. Brooke's No. 1 A. Gray, 330 ft. N and W, SE cor. SW NE, Sec. 35-8-13 ..... Location.
John R. Bunn's No. 1 Sabine Lbr. Co., 295 ft. S, 356 ft. W, NE cor. SW NE, Sec. 9-7-13 ..... S.D. 2,422 ft.
Byers et al's No. 1 Bishop, SW cor. SW NE, Sec. 16-7-13 ..... S.D. 41 ft.
Clopton et al's No. 1 Garcia, 330 ft. N and W, SE cor. SE NW Sec. 4-7-13 ..... Derrick abd.
Cloud & Bolin's No. 1 Bowman-Hicks, SE cor. NE NE, Sec. 26-9-13 ..... Drlg. 1,715 ft.
Coates Pet. Co.'s No. 2 Stille, 330 ft. N and E, SW cor. SE SW, Sec. 35-8-11 ..... W.O.S.R. 2,465 ft.
Coates Pet. Co.'s No. 3 Stille, 330 ft. N and E, SW cor., Sec. 35-8-13 ..... Location.
Mark Curtis et al's No. 1 Sabine Lbr. Co., 330 ft. N and W, SE cor. NE SE, Sec. 35-8-13 ..... Testing 2,400 ft.
R. Q. Daniels' No. 1 Armstrong, SE cor. SE NE, Sec. 31-8-10 ..... Derrick.
Mrs. Dabney's No. 1 Hill, 265 ft. N, 235 ft. W, SE cor. NE NE, Sec. 6-7-11 ..... Location.
Mrs. Dabney's No. 2 Hill, 330 ft. S, 235 ft. W, NE cor., Sec. 6-7-11 ..... Location.
R. E. Davidson's No. 1 Davis, 660 ft. S, 125 ft. E, NW cor., Sec. 28-7-11 ..... Dry and abd. 2,832 ft.
William DeSota's No. 1 Mooney, 350 ft. S, 395 ft. E, NW cor., Sec. 35-8-13 ..... Derrick abd.
Flinchbaugh & Myers' No. 1 Aaron, 250 ft. S and E, NW cor., Sec. 32-9-13 ..... Junked 1,975 ft; skidded and rigging up on new hole.
R. L. Gay, tr.'s No. 12 Bowman-Hicks, 330 ft. S, 330 ft. W, NE cor. SW SW, Sec. 14-7-14 ..... S.D. 2,397 ft.
R. L. Gay, tr.'s No. 1-A Long Bell Lbr. Co., 430 ft. S, 300 ft. W. NE cor. NW NW, Sec. 10-8-13 ..... Coring shale and lime 6,482 ft.
Gibson & Johnson, Inc.'s No. 1 Frost Lbr., 330 ft. S and E, from center Sec. 19-9-13 ..... W.O.S.R. 1,000 ft. oil in hole 1,625 ft.
Gibson & Johnson, Inc.'s No. 2 Frost Lbr., 330 ft. S and W. NE cor. NW NE, Sec. 15-9-13 ..... Rigging up.
W. N. Hankins' No. 1 Tilley, 300 ft. E, 30 ft. S, NW cor. SE SE, Sec. 30-8-12 ..... Arranging to set 4½-in. 2,162 ft.
Hollis et al's No. 1 Sabine State Bank, 350 ft. N and W, SE cor. SW SW, Sec. 28-8-11 ..... S.D. for fuel 1,025 ft.
Ab Jones' No. 1 Garcia, 200 ft. S and W, NE cor. NW SE, Sec. 4-7-13 ..... Set 6-in. 2,070 ft.
G. E. Jordan's No. 1 Dew, 330 ft. N, 340 ft. E, SW cor. SW SE Sec. 34-8-11 ..... S.D. for wtr. 950 ft.
E. P. Kilgore's No. 1 Thomas, 320 ft. S, 200 ft. E, NW cor. SE, Sec. 30-8-11 ..... Moving in rig.
Lane, Bundy & Allen's No. 1 Andrew, Sec. 22-7-11 ..... Derrick.
Geo. LeGrand's No. 1 McGough, Sec. 3-8-10 ..... Drlg. plug 2,180 ft; T.D. 2,200 ft.
H. C. Maulding's No. 1 Moores, 330 ft. S and W, NE cor. SE NE Sec. 16-7-13 ..... Drlg. plug 2,077 ft.
Paul L. Miller, tr.'s No. 1 Chadick, 550 ft. S, 178 ft. E, NW cor. NE SW, Sec. 32-8-10 ..... W.O.S.R. 2,589 ft.
R. F. Neely's No. 1 Rains, 660 ft. N, 100 ft. W, SE cor., SW NW, Sec. 14-7-11 ..... W.O.S.R. 2,541 ft.
W. M. Neely's No. 1 Buvens, 350 ft. S, 100 ft. E, NW cor. NE, Sec. 21-7-11 ..... Drlg. 2,230 ft.
C. D. Neff, tr.'s No. 1 Snell, Sec. 9-7-11, 350 ft. N, 660 ft. W, SE cor. Sec. ..... W.O.S.R. 2,509 ft.
H. W. Perritt's No. 3 Brown Lbr. Co., 510 ft. S, 455 ft. W, NE cor. NW NE, Sec. 31-8-10 ..... S.D. 400 ft.
Roy Raines et al's No. 1 Beard, 720 ft. E, 700 ft. N, SW cor. SW SE, Sec. 5-8-13 ..... Derrick.
Thornton et al's No. 1 S. S. Martines, 355 ft. S, 330 ft. W. NE cor. SE NE, Sec. 4-7-13 ..... S.D. 2,048 ft.
Otis A. Roberts' No. 1 Sabine Lbr. Co., 324 ft. S, 481 ft. W, NE cor. SW NE, Sec. 5-7-13 ..... S.D. 2,500 ft.
Roberts & Sledge's No. 1 La. Long Leaf Lbr. Co., 290 ft. N. 468 ft. E. SW cor. NE SE, Sec. 29-8-10 ..... Derrick pattern.
Roberts & Sledge's No. 2 Sabine Lbr. Co., 803 ft. W. 796 ft. N. SE cor. SE SW, Sec. 5-7-13 ..... Fishing 2,480 ft.
Roshko & Labarre's No. 1 Mainea, 427 ft. E, 114 ft. N, SW cor. SE NE, Sec. 35-8-11 ..... Derrick pattern.
Skidmore & Mize's No. 1 Stoker, 440 ft. N, 225 ft. E, SW cor. SE NW, Sec. 32-8-10 ..... Derrick.
C. W. Smith et al's No. 1 Pattison, 330 ft. S and E, NW cor. SE NW, Sec. 32-10-11 ..... Derrick.
Sneed & Sneed's No. 1 Pearce, 200 ft. N, 215 ft. E, SW cor. NE SW, Sec. 35-8-13 ..... Tested S.W.; S.O. 2,405 ft.
Southland Drlg. Co.'s No. 1 Frost Lbr. Co., 330 ft. N and W SE cor. NE NE Sec 13-9-11 ..... S.D. 1,905 ft.
H. B. Stacey et al's No. 1 Hefkobita, 457 ft. N, 583 ft. E. SW cor. SE, Sec. 34-8-13 ..... Drlg. 2,568 ft.
Supreme Oil Co.'s No. 1 Pruitt, 330 ft. N and E, SW cor. SE SW, Sec. 30-8-11 ..... Drlg. 6-in. plug 2,226 ft.
A. F. Tarver's No. 3 Cutrer, Sec. 12-7-11, 1,120 ft. E, 330 ft. S. SW cor. NW ..... W.O.S.R. 2,660 ft.
Thornton et al's No. 2 S. S. Martines, 312 ft. E. 385 ft. S, NW cor. SE NE, Sec. 4-7-13 ..... Location.
Triangle Drlg. Co.'s No. 1 La.-Long Leaf Lbr. Co., 330 ft. N and W, SE cor. Sec. 11-6-11 ..... S.D. 4,013 ft.
Tuffree et al's No. 1 T. L. Andries, N½ NE SE, Sec. 15-7-11 ..... S.D. 100 ft.
W. M. Ungerman's No. 1 F. Cross, 53 ft. S, 146 ft. W, NE cor. SW SE, Sec. 25-8-11 ..... Moving in rig.

TENSAS PARISH

H. V. Schumacker's No. 1 Currey, 1,320 ft. S, 1,320 ft. E, NW cor., Sec. 39-11-13 ..... S.D. 3,645 ft.

UNION PARISH

E. S. Goens et al's No. 1 Frost Lbr. Co., 330 ft. S and E, NW cor., Sec. 17-22-2e ..... Location.
Wong Hing, tr.'s No. 1 Union Sawmill Co., 712 ft. W, 240 ft. N, SE cor., Sec. 15-22-1e ..... Derrick.

VERNON PARISH

Earl Jones' No. 1 Willis, 350 ft. N, 400 ft. E, SW cor. SE SE, Sec. 32-3n-9w ..... Derrick.
Llano Co-operative Colony's No. 1 fee, NW NE, Sec. 34-2n-9w ..... Drlg. 2,400 ft.

WEBSTER PARISH

George Pearce et al's No. 1 Ambrose, 200 ft. N and W, SE cor. SW SE, Sec. 22-20-10 ..... Coring 2,500 ft.

WEST CARROLL PARISH

Mamie S. McCurry's No. 1 Richard & Donnaw, 300 ft. N and E, SW cor., Sec. 13-19-3e ..... Location.

WINN PARISH

P.V.T. Oil Co.'s No. 1 Southern Paper Co., 150 ft. S and W, NE cor. SW, Sec. 24-13-3 ..... Arranging to test 1,050 ft.

Arkansas

CLAY COUNTY

S. C. Jeffus' No. 1 Underwood, 510 ft. N, 350 ft. W, C, NW SE, Sec. 4-20-3 ..... S.D. 1,253 ft.

CLEBURNE COUNTY

Frank S. Craver et al's No. 2 Doniphan Lbr. Co., 700 ft. N, 200 ft. E, SW cor. SW, Sec. 34-11-9 ..... Drlg. sandy lime 1,580 ft.

COLUMBIA COUNTY

Kendall Oil Co.'s No. 1 Fullenweider, 300 ft. S and E, NW cor. NE NE, Sec. 13-17-22 ..... S.D. 2,175 ft.

DREW COUNTY

Co-Operative Dev. Co.'s No. 1 Ogles, Sec. 35-15-5, 330 ft. S and E, NW cor. NE NW ..... Reaming to bottom 3,340 ft.

HOT SPRINGS COUNTY

Star Oil Co.'s No. 1 Cunningham, 285 ft. S, 285 ft. W, NE cor., Sec. 11-5-16 ..... S.D. 1,340 ft.

LAFAYETTE COUNTY

Fox & Langford's No. 1 Coleman Bros., 330 ft. S and E, NW cor. SE SE, Sec. 25-16-25 ..... Derrick.
Sam E. Wilson, Jr., No. 1 Smith, 330 ft. N and E, SW cor. NW SE, Sec. 24-19-25 ..... Derrick pattern.

LINCOLN COUNTY

Lawrence Cook, tr.'s No. 1 McGhee Planting Co., 420 ft. S, 200 ft. W, NE cor. NE SW, Sec. 5-8-7 ..... S.D. 3,250 ft.

LITTLE RIVER COUNTY

American Portland Cement Co.'s No. 1 fee, 150 ft. S and E, NW cor. SW NE, Sec. 21-12-32 ..... Derrick.
Harrell et al's No. 1 Taffee, 33 ft. W, 630 ft. E, 330 ft. S, SW cor. W NW, Sec. 25-12n-32w ..... S.D. 2,972 ft.

MILLER COUNTY

Duluth-Ark. Oil Co.'s No. 1 Stone, SE cor. SW, Sec. 32-14-26 ..... Plugged back to 2,300 ft.; T.D. 2,535 ft.
Goodwin et al's No. 1 E. A. McCowan, NW cor. NW SE, Sec. 22-15-28 ..... Rigging up.
Fitzwater et al's No. 1 C. J. Norsen, SW cor. SE SW, Sec. 20-15-27 ..... S.D. 121 ft.
Fitzwater et al's No. 1 Beck, Sec. 33-15-26 ..... Resetting 4½-in.; T.D. 2,954 ft.
Fitzwater et al's No. 2 Beck, 150 ft. N and E, SW cor. SW SE, Sec. 33-15-26 ..... Derrick.
Fitzwater et al's No. 1 Fouke, 150 ft. S and W, NE cor., Sec. 11-17-27 ..... S.D. 105 ft.
Wm. S. King's No. 1 Beck, 330 ft. S and E, NW cor. NE NW, Sec. 35-15-26 ..... Set 10-in. 100 ft; drlg. 1,185 ft.
Chas. B. Lenz's No. 1 Dean, 125 ft. E, 200 ft. S, NW cor. SE Sec. 19-15s-25w ..... Derrick.
W. E. Noel et al's No. 1 Dickson hrs., 1,980 ft. W, 660 ft. S, NE cor., Sec. 11-20-27 ..... S.D; W.O. 2,600 ft.

OUACHITA COUNTY

McLeon et al's No. 1 L. D. Neely, Sec. 23-15-16, 200 ft. N and W. SE cor. NE SW ..... S.D. 150 ft.
Chas. Steele et al's No. 1 Anderson, 155 ft. S, 150 ft. E, from center Section 36-12-18 ..... S.D. 525 ft.

PIKE COUNTY

R. R. Henderson's No. 1 J. L. Lee, 400 ft. S, 350 ft. E, NW cor. SW SE, Sec. 31-8-24 ..... S.D.; W.O. 1,020 ft.
R. R. Henderson's No. 1 W. B. East, 200 ft. S, 150 ft. W, NE cor., Sec. 13-9-23 ..... S.D.; rig.

PRAIRIE COUNTY

Powell Creek O. & G. Co.'s No. 1 Kloss, NE SW, Sec. 3-4n-6w ..... Partly rigged up and S.D.

ST. FRANCIS COUNTY

R. R. Henderson's No. 1 Britton, Sec. 1-4-1e, 1,000 ft. S and E NW cor. NE NW ..... Drlg. hard shale 3,370 ft.

UNION COUNTY

Cox et al's No. 1 Goodwin, 360 ft. S, 180 ft. W, NE cor. SW SW, Sec. 3-16-16 ..... S.D. 140 ft.
H. H. Helms' No. 1 C. H. Murphy, NE cor. NW NE, Sec. 31-18-14 ..... Rigging up.
Wilson & Chapman's No. 1 King, Sec. 3-18-13, 330 ft. N and E. SW cor NE NE ..... Derrick.
Wilson & Chapman's No. 1-A D. Norman, 330 ft. S and E, NW cor. N½ NE SE, Sec. 3-18-13 ..... S.D. 1,678 ft.

WASHINGTON COUNTY

(Cable tools)

A. B. Chase and Ed Rogers' No. 1 Cunningham, 125 ft. S, 300 ft. W, NE cor. SW NE, Sec. 14-15-32 ..... S.D. 1,750 ft.

WOODRUFF COUNTY

B. F. Thompson's No. 1 Rosser, 500 ft. N and E, SW cor. SE SE Sec. 7-5n-2w ..... Location.

East Texas

BOWIE COUNTY

Logan & Elliott's No. 1 Smith, 9,600 ft. S, 2,500 ft. W, NE cor. Chas. Lewis Sur. ..... S.D. 4,505 ft.
Lanford et al's No. 1 W. W. Whybark, 200 ft. S, 200 ft. W, SW cor. J. H. Dyer Sur. ..... S.D. 1,792 ft.

CASS COUNTY

Davis & Pigg's No. 1 Roy Bryan, SW cor. Roy Bryan 33-ac. tr., Albert H. Lattimer Sur. ..... S.D. 2,860 ft.
C. E. Murdock's No. 1 First National Bank, Evans Watson Sur. ..... S.D. 4,390 ft.
John C. Rogers' No. 1 I. E. Lanier, 573 ft. N, 879 ft. W. SE cor. Lanier 86 ac. in K. E. Welborn Sur. ..... S.D. 2,280 ft.
John C. Rogers et al's No. 1 W. Q. Henderson, 2,100 ft. S, 3,100 ft. E, NW cor., Wm. Davis Sur. ..... S.D. 960 ft.

HARRISON COUNTY

Pat Hudson et al's No. 1 Heitt, B.B.B.&C.R.R. Sur. ..... Location.
S. Nash et al's No. 1 Henderson, G. L. Bledsoe Sur. ..... Drlg. 3,485 ft.
Ryan Cons. Pet. Corp.'s No. 1 J. M. Fuhr, 1,300 ft. N of NW cor. T. J. Copelin Sur., 1,675 ft. SW at right angles to NW SE line of O'Neal Sur. ..... Reaming 4,185 ft.
Triangle Drlg. Co.'s No. 1 Platt, 1,125 ft. W, 1,995 ft. N, SE cor. F. C. Barker Sur. ..... Location.

MARION COUNTY

Bannock Dev. Co.'s No. 1 Miller, 725 ft. N, 1,470 ft. E, SW cor. H. Fulgram Sur. (was Gist, Claunch & Dodson) ..... S.D. 4,460 ft. (corrected).

Geo. Hindeman et al's No. 1 F. V. Lindsey, 2,500 ft. S, most northerly N line, 3,555 ft. E most easterly W line, Alexander Albright Sur. ....S.D. 2,380 ft.
Purcell et al's No. 1 Coker, M. Reed Sur. ....S.D. 1,957 ft.
Starling & Preston's No. 1 Henderson, R. Bennington Sur. H. R. S. ....S.D. 70 ft.

PANOLA COUNTY

Root-Skinner's No. 1 Daniel, 600 ft. N and W lines, Mrs. Gerrell 100-ac. tr., SW cor. Isabel Hanks Sur....S.D. for D.S. 740 ft.
J. L. Nelson et al's No. 1 J. Williams, 300 ft. S, 700 ft. W, NE cor. Williams' 67-ac. tr. in James Hanks Sur. ....S.D. 3,055 ft.

SHELBY COUNTY

E. H. Francis' No. 1 John Mims, Mary Smith Sur. .. ..Coring 2,837 ft.
General Minerals Co.'s No. 2 Pickering Lbr. Co., 600 ft. N, 400 ft. E, SW cor. D. S. Height Sur. ..... Drlg. 2,685 ft.
Oil News' No. 1 Pickering, C. H. Patterson Sur. ....S.D. 3,300 ft.
Henry Maulding's No. 1 Frost Lbr. Co., NE cor. Frost Lbr. Co.'s 20-ac. tr., A. D. Fountain Sur. ....Rigged up and S.D.
Prairie Creek Crude Co.'s No. 1 Ellington, 150 ft. N and 200 ft. W from SE cor. 42-a. tr. of J. Burleson Sur....S.D. 2,822 ft.
Ridgeway et al's No. 1 Polley, Dominguez Gonzales Sur., 3,150 ft. E of SW cor., 160 ft. N at right angles of Polley 457-ac. tr. ....Drlg. 2,895 ft.
Sudberry et al's No. 1 Pickering Lbr. Co., 600 ft. N, 400 ft. E. SW cor. Jane Stoddard Sur. ....S.D. 2,375 ft.
Western World's No. 1 Foster, Billingsby-Jeremiah Bowlin Sur. ....S.D. 2,940 ft.
Wray & Dunbar's No. 1 C. A. Hayden, 600 ft. N and W SE cor. 153-ac. tr. in D. T. F. Yordt Sur. ....S.D. for wtr. 2,280 ft.

Louisiana-Arkansas Proven Areas

North Louisiana

CADDO—PINE ISLAND AREA

Company, well, farm name, section and block— Remarks:
Shreveport Oil Corp.'s No. 1 Muslow, 900 ft. N, 100 ft. E, from C. Sec. 32-21-15 ....Set 10-in. 40 ft; drlg. 700 ft.

CADDO—RODESSA AREA

Ark.-La. P. L. Co.'s No. 1 F. E. Lloyd, 660 ft. E, 100 ft. S, NW cor. NW NE, Sec. 34-23-16....S.D. 210 ft.

CADDO—BETHANY AREA

Calatex O. & G. Co.'s No. 1 Mrs. E. Augura, 3,567 ft. N, 2,600 ft. E, SW cor., Sec. 19-16-16 ....Derrick.
Calatex O. & G. Co.'s No. 1 J. M. Agure, 2,000 ft. N, 800 ft. E, SW cor., Sec. 9-16-16....Drlg. 2,775 ft.

CADDO PARISH

Louana Oil & Gas Co.'s No. 1 Cushman, 1,380 ft. N, 600 ft. E, SW cor., Sec. 33-19-14 ....T.A. 2,800 ft.

CADDO—BLANCHARD AREA

Nick Barbare's No. 1 Hammeck, 330 ft. S, 150 ft. W, NE cor., Sec. 6-18-16 ....Derrick.
Louana O. & G. Co.'s No. 1-A Hammeck, 760 ft. S and W, NE cor., Sec. 5-18-16 ....Rigging up.
Triangle Drlg. Co.'s No. 1 Brown, 1,542 ft. N, 1,900 ft. W, SE cor. NE, Sec. 1-19-6 ....Comp. estimated 5,000,000 ft. gas 4,490 ft.

RICHLAND PARISH

Pelican Nat. Gas Co.'s No. 2 Noe, 1,320 ft. N, 660 ft. W, SE cor. SW, Sec. 11-17-5e ....Location.

SABINE PARISH—ZWOLLE

Abbott & Rankin's No. 1 Nulten, 330 ft. S and E, NW cor. SE NE, Sec. 2-7-13 ....W.O.S.R. 2,397 ft.
Jule Alford's No. 1 Stoker, 212 ft. N and W, SE cor. NE SW, Sec. 10-7-11....S.D. repairing rig 1,010 ft.
J. O. Andree's No. 1 Sabine Lbr. Co., 230 ft. S and E, NW cor. SW NW, Sec. 11-7-12 ....Drlg. 2,585 ft.
J. H. Askew's No. 2 Henderson, 420 ft. S, 190 ft. W, NE cor. SW SE, Sec. 31-8-10....Set 10-in. 42 ft; drlg. 380 ft.
J. H. Askew's No. 2-E McNeely 65 ft. S, 100 ft. W, NE cor. SE NE, Sec. 14-7-11....Drlg. 2,580 ft.
J. H. Askew's No. 1-E McNeely, 220 ft. S, 260 ft. W, NE cor. SE NE, Sec. 14-7-11 ....Dry and abd. 2,632 ft.
J. H. Askew's No. 1 Lyons, 330 ft. W, 252 ft. N, SE cor. SE NE, Sec. 31-8-10....Dry and abd. 2,760 ft.
Askew & Ellis' No. 3-E McNeely, 230 ft. N and W, SE cor. NE, Sec. 14-7-11 ....Derrick.
Baird Bros.' No. 3 Martinez, 1,012 ft. S, 907 ft. E, NW cor. NW SW, Sec. 2-7-13....Drlg. 1,200 ft.
Baird, Stone & McFaddin's No. 1 Duggan, 150 ft. S and W, NE cor. SE, Sec. 14-7-11....Set 10-in. 43 ft; drlg. 1,460 ft.
C. W. Beene et al's No. 1 Cutrer, 200 ft. N and E, SW cor. NW, Sec. 12-7-11 ....Derrick pattern.
Cameron Oil Co.'s No. 1 G. Martinez, 345 ft. E, 540 ft. N, SW cor., Sec. 2-7-13 ....Rigging up.
Capitol-Crescent Oil Co.'s No. 1 Sabine State Bank, 990 ft. E. 825 ft. N, SW cor. NW SW, Sec. 2-7-13....Derrick.
Coates Pet. Co.'s No. 4 S. S. Martinez, 97 ft. S, 215 ft. W, NE cor. NE SE, Sec. 3-7-13.... ....Dry and abd. 2,519 ft.
Coates Pet. Co., Inc.'s No. 1 Gray, 200 ft. S, 32 ft. E, NW cor. SE SW, Sec. 3-7-13 ....Derrick pattern.
Continental Drlg. Co.'s No. 1 Leone est., 70 ft. N, 200 ft. W, SE cor., Sec. 31-8-12....Derrick.
Dangall O. & G. Co.'s No. 1-F Nulton, 330 ft. S and E, NW cor. SW NW, Sec. 2-7-13.... ....Abd.; will not pump 2,501 ft.
Dangall O. & G. Co.'s No. 2-G Nulton, 330 ft. N and E, SW cor. NE NE, Sec. 3-7-13 ....Dry and abd. 2,475 ft.
Edwards & Hubler's No. 1 G. Martinez, 510 ft. S, 280 ft. E. NW cor. SW SW, Sec. 2-7-13.... ....Derrick.
J. E. Grandstaff's No. 1 Johnson, S½ SW SW, Sec. 2-7-11 W.O.S.R. 2,592 ft.
J. J. Hall's No. 4 Jacoba, 175 ft. W, 300 ft. N, SE cor. Sec. 1-7-11 .. ..S.D. 2,710 ft.
V. R. Hammons et al's No. 1 Travis, 540 ft. N, 150 ft. E, SW cor. NW SE, Sec. 13-7-11 ....Derrick.
D. D. Holcomb's No. 2 Quayhagiew, 149 ft. N, 200 ft. E SW cor. SE SE, Sec. 11-7-11 .... Testing 2,652 ft.
J. B. Hughes' No. 1 Johnson, 250 ft. S, 670 ft. E, NW cor. SW NW, Sec. 2-7-11 ....Derrick.
Imperial Producers Co.'s No. 1 Leone Est., 1,334 ft. S. 660 ft. E, NW cor., Sec. 32-8-12 ....Location.
H. M. Jones' No. 1 Raines, 300 ft. S, 150 ft. W, NE cor. NW NW, Sec. 14-7-11 .. ..S.D. 2,396 ft.
Lanier et al's No. 2 Steinhorst, 150 ft. S and W, NE cor. SE NW, Sec. 3-7-13.... ....W.O.S.R. 2,450 ft.
Lee & Burnett's No. 1 Travis, 510 ft. S, 150 ft. E, NW cor. NE NW, Sec. 18-7-11....Drlg. 6-in. plug 2,445 ft.
Lion Oil Ref. Co.'s No. 2 LaRoux, 384 ft. S and W, NE cor. SW SE, Sec. 3-7-13 ....Location.
Lyons & Neely's No. 3 Clanon, SE cor. SE NW, Sec. 14-7-11 ....Tested dry; S.O. 2,705 ft.
Loring Oil Co.'s No. 21 Bowman-Hicks, 450 ft. S, 275 ft. E. NW cor. SW NW, Sec. 16-7-12.. ....Drlg. 3,475 ft.
Magnolia Pet. Co.'s No. 2 Williams, 240 ft. S, 261 ft. E, NW cor. NW NE, Sec. 6-7-10....W.O.S.R. 2,653 ft.
H. D. McDonald's No. 1 T. L. Andrin, 180 ft. E. 150 ft. N SW cor. NW SE, Sec. 15-7-11 .... Derrick.
L. M. McGuffin's No. 1 Chadick, 300 ft. N, 275 ft. E, SW cor. NE SE, Sec. 31-8-10.... .... S.D. for wtr. 200 ft.
Frank Melat's No. 1 Davis, 175 ft. W. 225 ft. S. NE cor., Sec. 2-7-11 .... S.D. 2,572 ft.
Ben Merritt, trustee's No. 1 Chadick, SW cor. SW NE, Sec. 31-8-10 ....Set 6-in. 2,346 ft.
E. F. Neely's No. 3 Pounder, 200 ft. S, 190 ft. E, NW cor. NW, Sec. 15-7-11 ....Rigging up.
E. F. Neely's No. 4 Pounder, 220 ft. E, 225 ft. S, NW cor. SW SW, Sec. 15-7-11 ....Derrick.
Pelican Nat. Gas Co.'s No. 16 La. Long Leaf Lbr. Co., 86 ft. S, 544 ft. W, NE cor. NW NE, Sec. 10-7-11....Swabbing 2,565 ft.
Pelican Nat. Gas Co.'s No. 9 Sabine Lbr. Co., 200 ft. N and E, SW cor. NE SW, Sec. 3-7-13....Swabbing 2,097 ft.
T. L. Phillips et al's No. 1 Haley, 330 ft. S and E, NW cor. SW SE, Sec. 6-7-12 ....Derrick.
H. C. Pitts et al's No. 1 Trammell, 1,037 ft. S, 150 ft. E, NW cor. NE NE, Sec. 5-7-11....Location.
Ritchie Prod. Co.'s No. 1 Byrd, 503 ft. N, 399 ft. W, SE cor. NE NW, Sec. 1-7-11....W.O.S.R. 2,465 ft.
C. T. Ruffin's No. 1 Lilly, 545 ft. S, 200 ft. W, NE cor. NW NW, Sec. 8-7-11 ....Rigging up.
Sabine Prod. Co.'s No. 3 Pearce, Sec. 10-7-11, 330 ft. S and E, NW cor. SE NW.... ....S.D.; W.O. 2,699 ft.
Sabine Prod. Co.'s No. 3 Sabine Lbr. Co., SW cor. NW SE, Sec. 3-7-13 ....Set 10-in. 43 ft; drlg. 735 ft.
E. M. Self's No. 2 Henderson, 335 ft. N and E, SW cor. SE SE, Sec. 31-8-10 ....Rigging up.
Skidmore Oil Co.'s No. 2 G. Martinez, 330 ft. S and W, NE cor. SE SE, Sec. 3-7-13....Set 10-in. 38 ft.
Scully & Beach's No. 3 Lafitte, 1,030 ft. S, 134 ft. E, NW cor., Sec. 13-7-11....Set 10-in. 41 ft; drlg. 2,070 ft
Ben F. Smith's No. 3 Turner, Sec. 4-7-11, 1,340 ft. E, 200 ft. S, NW cor., Sec. 4-7-11 ....Rigging up.
F. E. Stancil's No. 1 Pounder, 275 ft. S, 397 ft. E, NW cor. NE SE, Sec. 10-7-11 .. ..S.D. 2,593 ft.
State Prod. Co.'s No. 1 Keazele, 150 ft. N and W, SE cor. NW SW, Sec. 3-7-13 ....S.D.; W.O. 2,427 ft.
State Prod. Co.'s No. 1 Lites, 150 ft. S and W, NE cor. SE SW, Sec. 28-8-11 ....Derrick.
State Prod. Co.'s No. 1 Sabine Lbr. Co., 365 ft. N, 100 ft. W SE cor. NW SW Sec. 3-7-13 ....S.D. 2,427 ft.
H. H. Stout et al's No. 1 Byrd, 150 ft. N and E, SW cor. NW NW, Sec. 1-7-11....S.D. for csg. 2,332 ft.
The Coming Oil Co.'s No. 1 Williams, 130 ft. N, 50 ft. E, SW cor. SE SW, Sec. 31-8-10.. ....Set 6-in. 2,357 ft; testing 2,551 ft
Turnbow & Lacey's No. 1 McNeely, 550 ft. E, 230 ft. N, SW cor. NE NE, Sec. 14-7-11 ....Derrick.
C. H. Tuttle's No. 3 Byrd, 700 ft. E, 510 ft. S, NW cor., Sec. 7-7-10.... .... W.O.S.R. 2,727 ft.
J. H. Watt et al's No. 1 Pouder, 200 ft. S, 135 ft. W, NE cor. NW NE, Sec. 15-7-11 ....Derrick pattern.
B. R. White et al's No. 1 Stille, 620 ft. W, 205 ft. N, SE cor. NE SW, Sec. 35-8-13....Location.
J. P. White's No. 1 Nulton, 330 ft. N and E, SW cor. NE NW, Sec. 1-7-13 .... S.D. 2,455 ft.
George Woulf's No. 1 Nulton, 330 ft. S, 380 ft. E, NW cor. SW NE, Sec. 3-7-13 .... W.O.S.R. 2,430 ft.

UNION PARISH

G. H. McHenry, tr.'s No. 1 Potts, 2,044 ft. N, 394 ft. W, SE cor. NE. Sec. 15-21-2e....Derrick pattern.
Southern Carbon Co.'s No. 62 fee, 1,920 ft. S and W, NE cor. NW, Sec. 30-20-4e....Location.

Arkansas

UNION COUNTY—URRANA

Marine Oil Co.'s No. 1 Winn est., 330 ft. S and E, NE cor. S½ NW. Sec. 11-18-13 ....T.A. 3,586 ft.
Marine Oil Co.'s No. 2-E Thompson, 330 ft. N, 330 ft. E, SW cor. NE NE, Sec. 10-18-13.... .... Location.
Wilson & Chapman's No. 1-B Hadley, Sec. 3-18-13, 330 ft. S and W NE cor SE NW.... .... T.A. 3,545 ft.
Wilson & Chapman's No. 2 Emily King, Sec. 3-18-13, 150 ft. S, 150 ft. E, NW cor. NE NE....S.D. 1,780 ft.

East Texas

PANOLA COUNTY

Daisy O. & G. Co.'s No. 1 Rucks, John Palmer Sur. ....S.D. 3,359 ft.

Mississippi

HINDS COUNTY

Jackson O. & G. Co.'s No. 4 Mayes, 1,400 ft. E, 211 ft. S, NW cor., Sec. 1-5n-1e ....Comp. estimated 10,000,000 ft. gas 2,415 ft.

RANKIN COUNTY

Love Pet. Co.'s No. 1 Hatfield, Sec. 6-5n-2e....Comp. estimated 40,000,000 ft. gas 2,420 ft.
J. A. Matson et al's No. 1 Warner, 1,100 ft. S, 200 ft. W, NE cor. W½ SE, Sec. 14-5n-1e....Set 8⅝-in. csg. 810 ft.

Wildcat Operations in Mississippi

AMITE COUNTY

Company, well, farm name, section and block— Remarks:
Magnolia State O. & G. Co.'s No. 1 Anderson, C NE NW, Sec. 14-3n-3e ....S.D. 127 ft. (corrected).

CLARKE COUNTY

F. X. Gowans et al's No. 1 Elfring, SE NE. Sec. 13-1n-14e. S.D. 104 ft

HINDS COUNTY

Love & Lancaster's No. 1 Elton Plantation, C SE, Sec. 17-4n-1e .. ..Drlg. 2,850 ft.
National Gas Co.of Miss.' No. 1 M. C. Halder, 160 ft. E, 660 ft. N, SW cor., Sec. 16-6n-1e ....Derrick.

JASPER COUNTY

B. B. Jones' No. 1 Bank of Philadelphia, 660 ft. N and W, SE cor., Sec. 35-3n-12e ....Rigging up.

LAMAR COUNTY

Chas. W. Gorr et al's No. 1 Jordan, NW C of SW, Sec. 1-2n-15w ....Derrick.
Stauffer & Kouri's No. 1 Bond, SE NE, Sec. 18-2n-14w..Tested S.W. and smell of gas 3,026 ft.

LOWNDES COUNTY

Lowndes County Oil & Dev. Co.'s No. 1 Carr est., Sec. 34-17-16e. 1,320 ft. E, 330 ft. S, NW cor. Sec .... S.D. 2,200 ft.

MONROE COUNTY

P. J. McAlpine's No. 1 Rye, Sec. 22-15n-17w ....S.D. 1,777 ft.

NEWTON COUNTY

Bob Dalton's No. 1 Majure, 400 ft. N, 300 ft. E, SW cor. SE, Sec. 25-6n-11e.... .... ..S.D. 1,650 ft.

RANKIN COUNTY

Home Oil Prod. Corp.'s No. 1 So. Jackson Land Co., 55 ft. S, 130 ft. W, NE cor. NW NW, Sec. 23-5n-1e.....Arranging to set 4½-in. csg. 2,488 ft.
Love Pet. Co.'s No. 2 Int. Lbr. Co., 450 ft. S and E, NW cor., Sec. 28-5n-2e....T.A. 2,657 ft.
Majestic O. & G. Co.'s No. 1 Elton Lbr. Co., Sec. 10-4n-3e Derrick.

SCOTT COUNTY

M. U. Culley et al's No. 1 Owens, Sec. 2-8-9....S.D. 750 ft.

Wildcat Operations in Alabama

LAMAR COUNTY
(Cable tools)

Company, well, farm name, section and block— Remarks:
DeSoto O. & G. Corp.'s No. 1 Gardner, NW NW, Sec. 32-15s-16w ....Drlg. 3,226 ft.

MOBILE COUNTY

J. C. Prine et al's No. 1 M.&O.R.R., Sec. 33-2n-4w .. Reaming 3,218 ft.

WASHINGTON COUNTY

South Alabama O. & G. Co.'s No. 1 Wilson, Sec. 26-7n-1w.Drlg. 1,850 ft.

Metallurgical Aspects of a New Oxyacetylene Method of Welding in the Oil Industry

By F. C. HUTCHINSON
Linde Air Products Co.*

In any discussion of advancements in the art of welding, it is only fair to acknowledge that it is largely due to the petroleum industry that improvement in welding methods has been so rapid in the past decade. This is especially so in the fields of welded piping and pressure vessels. Expansion which has taken place at such an accelerated pace in this widespread industry has meant the use of higher pressures and temperatures to gain economical production in many refining and transport operations. Welding was quite naturally looked to for a solution of problems subsequently arising, and in keeping abreast of developments, it has contributed greatly through decreasing installation and maintenance costs.

The metallurgist has worked hand in hand with the actual users of welding in the advancement of this art, assisting development with improved welding rods and specifications for weldable steel, and by checking welding procedures as well as determining appropriate tests for the welders and the finished work. In particular, the metallurgist is responsible for the most recent advance of importance in the field of welding—the perfection of a new oxyacetylene welding method known to the industry as Lindewelding. Since its introduction several years ago, this new method has been successfully employed in the construction of over 3,000 miles of pipe line in the petroleum industry. Its use in the field has amply justified the original expectations of its discoverers, especially with respect to the quality and economy of welding, and its suitability for the higher strength piping being introduced.

Research Work

A great many facts concerning welding heretofore not well understood were brought out during the laboratory investigations and it is felt that a summary of the research work performed and conclusions arrived at, together with the features and subsequent development of the new welding method, will prove interesting as well as instructive.

The new welding method differs considerably in several important details from oxyacetylene welding procedures formerly used. Several modifications of the essential procedures are possible and each has its own particular field. For pipe welding and similar work, a carbonizing flame is used in place of the customary neutral flame; a special welding rod is required; and a special but simplified welding technique is employed. The special characteristics of the new method result chiefly from the use of the carbonizing flame or of a flame suitably manipulated to produce a carbonizing effect. It was the discovery of the advantages of such flames that resulted in the development of the new process.

It was during an investigation of a modified type of butt welded steel pipe joint, wherein a combination of pressure and fusion was used, that the unique relationship between carbon and iron in welding was discovered. It was noted under the microscope that on those portions of the weld where fusion had not been obtained and pressure only had been applied, there were remnants of surface oxide film, much as in a forge weld. The possibility suggested itself of utilizing the well-known deoxidizing power of carbon, ready at hand in the oxyacetylene welding flame, both to prevent oxidation and to reduce such oxides as might be present. To carry out this idea, an excess acetylene flame was applied to the surfaces to be welded in order to carburize them. After this operation the weld was made, and upon examination it proved to be remarkably free from oxide inclusions. With further experimentation, it was found beneficial, as a protection to the carburized surfaces, to weld with an excess acetylene flame. During this experimental welding, it was noticed that the molten weld metal tended to flow out readily over the molten carburized surface film just ahead of the advancing puddle much as solder does on fluxed copper. It was found unnecessary to puddle the base metal in order to obtain a perfect weld, which seemed logical in view of the three essential requirements of any welding operation. A discussion of these will serve to show the fundamental soundness of the new method.

Elimination of Oxide

Probably the most important requirement in the joining of metals by welding—or soldering and brazing for that matter—is the elimination of the oxide which forms on heated metal and which otherwise prevents intimate metal-to-metal contact. Soldering and brazing rely on a suitable flux for this purpose, which removes metallic oxides from the surface of the base metal by uniting with them chemically.

In the case of a forge weld, force is used to squeeze out the oxides and to bring the surfaces into contact. The objects are most always prepared with convex surfaces to facilitate the squeezing out process. A flux is usually relied upon to reduce oxidation and to unite with and render the metallic oxide fluid. Slag always remains as a discontinuous film at the boundary of a forge weld, but except where the slag film is present a true weld occurs.

Fusion welding may also employ a flux, but usually, in the fusion welding of steel, the removal of the metallic oxide is accomplished by melting the oxide coated surfaces, which permits the lighter oxide to float to the surface of the puddle. The molten rod metal, if any, mixed, of course, with such base metal as has been melted to effect removal of the oxide, then makes contact with the base metal and unites with it.

It can be seen then that besides the important requirement of the removal of oxide from surfaces to be welded, it is necessary that the surfaces be brought into contact (in the case of fusion welding, this is accomplished by fluidity of the base metal and of the weld metal, if any), and the temperature of the parts to be joined, at surfaces and in the adjacent zones, must be sufficiently high that union will occur in a reasonably short time. These three conditions are required whatever the agencies may be that are instrumental in effecting them.

With the new welding method, therefore, it seemed that these essentials might be obtained without either force or puddling the base metal, through the agencies of three functions of carbon, i.e., its reduction of iron oxide, its ready diffusion into iron, and its formation with iron of an alloy having a melting point several hundred degrees below that of steel.

Melting Point

When carbon dissolves in solid iron, which it does rather rapidly at elevated temperatures, the melting point of the mixture falls below that of pure iron. The more carbon, up to about 4½ per cent, the lower will be the melting point, pure iron melting at about 2,790° F., while the 4½ per cent mixture melts at about 2,100° F. If, therefore, we heat steel whose melting point is about 2,730° F. to a temperature somewhat below this, say to 2,190° F., and then expose it to a carburizing influence, the surface layer of the white-hot steel will absorb carbon and will spontaneously melt as soon as the carbon content approaches 4½ per cent. The molten carburized film covering the surface of the steel also prevents oxidation.

If molten steel is allowed to run over the surface of the white hot steel thus carburized, the molten surface film is immediately dissolved in the molten steel, which then unites with the underlying solid metal.

The forward edge of the advancing puddle of weld metal as it progresses along the joint, having absorbed the carbonaceous flux, contains about 0.40 per cent carbon, whereas the finished weld has less than 0.30 per cent carbon, being diluted with rod metal.

The importance of the carbonaceous flux can be seen in three functions it performs with respect to the three essentials for a welding operation, namely: (1) It prevents oxidation; (2) it promotes intimate contact by acting as a flux and by allowing the molten metal to run out over the base metal; (3) it acts as a temperature indicator, showing by melting the proper time to add the molten rod metal. It was of course a fortunate circumstance from the standpoint of practical application that the carbonaceous flux could be readily formed by the use of the oxyacetylene flame which was already so widely used in welding operations.

Near the conclusion of the experimental work on the new process, it was a simple matter to determine the minimum amount of excess acetylene required in the welding flame to carburize the surfaces suitably and to find the maximum amount which could be used without adding carbon to the weld metal to an undesirable extent.

Special Welding Rod

It had long been an accepted principle that the use of an excess acetylene flame was detrimental in welding mild steel; however, welds had been made experimentally with the new process that were of superior quality. Upon further investigation, it was found that an important contributing factor was the use of a special welding rod—one commonly selected for experimental welding in this research laboratory. The need for a special welding rod constitutes in a large part, the basis for the taboo that had existed regarding the use of the excess acetylene flame in welding steel, namely, the tendency for blowholes to occur with the usual compositions of base metal and welding rod. As is well known in steel founding, silicon and manganese, among other elements, tend to prevent the formation of blowholes in castings, and it is the presence of these elements in the special welding rod that assists in obtaining sound welds in the new method of welding.

In addition to the beneficial results of the carbonaceous flux and special welding rod, a third factor adds greatly to the quality of weld metal secured with the new method. The ability to produce a weld without melting the base metal prevents the dilution of the rod metal with base metal. Thus, with the special welding rod of suitable composition for this type of welding operation, the quality of the weld is actually superior to that of the base metal.

Where a rod containing, say 0.15 per cent carbon is used to weld plate having a carbon content of between 0.15 and 0.35 per cent, the weld metal will contain about 0.25 to 0.30 per cent carbon or approximately the same amount as the base metal. A lower carbon content can be obtained if desired. The physical properties of such weld metal are superior on the whole to those of the plate. Ductility is high because of the soundness and oxide-free character of the weld metal. In the "as-welded" state, welds of the type mentioned above as made in the laboratory have outpulled plate having a tensile strength of over 90,000 pounds per square inch. At the same time, the ductility of these welds, as measured by the bend test, ranged from 20 to 25 per cent. Normalized welds had a ductility of between 40 and 50 per cent, while that of fully annealed welds was even higher. When it is considered that a ductility of 15 per cent is ample, denoting sound weld metal and toughness, the high quality of the weld is apparent.

Suitable Technique

Practically all of the early experimental work was directed toward the development of a suitable technique or procedure by which welds of superior quality and strength could be produced in the welding of high strength steel. The new method soon proved, however, to have large economic advantages over former methods of oxyacetylene welding and it was also found that less skill was required on the part of the welding operator. To a considerable degree, all the results—quality, economy and facility of operation—are made possible from the fact that it is no longer necessary to melt the surface of the steel any more than just enough for the removal of oxide or surface defects on the scarf.

With other methods of oxyacetylene welding, the contiguous edges of plates usually require beveling to an angle of 45 degrees. This results in a v-shaped opening with an included angle of 90 degrees, which must be filled in with welding rod. This angle is necessitated by the puddling operation, which is performed for the purpose of floating out iron oxide and slag and for insuring thorough fusion and penetration. As used by the welder these terms mean the intimate mixing of the molten rod metal with the molten base metal over the entire scarf or beveled surfaces, accomplished by progressively melting the opposing beveled surfaces at the edge or just inside the edge of the advancing puddle and filling the intervening space with metal melted from the end of the welding rod suitably manipulated in the puddle of molten steel. As the forward edge of the puddle continues to advance along the open V its rear edge solidifies. A suitable manipulation of the blowpipe is also required which in combination with that of the rod enables the welder to control the puddle and to float out oxide. A certain amount of skill is required to insure on the one hand that the walls of the V are thoroughly fused, and on the other hand to avoid heating the puddle unduly above the melting point, for this might not only damage the metal but also cause it to run through the bottom of the V.

With the new technique, the operator directs the suitably adjusted flame so as to form the low melting film continuously just ahead of the advancing puddle, and, being free from much of the manipulation formerly necessary, he is able to devote most of his attention to obtaining a more efficient use of the flame. Correlative

*Before Mid-Continent section, A.S.M.E., Tulsa.

modifications in other factors affecting the welding procedure followed naturally. The most important of these from the standpoint of economy are: (1) A considerable reduction in the angle of the V, requiring less welding rod; (2) an increase in the size of the welding flame and rod that could be satisfactorily employed for a given thickness of base metal. With less welding rod to add, with the necessity of melting base metal removed, and with a larger flame, the welding speed was doubled and in some cases tripled. Furthermore, as the welding speed was increased, there was a corresponding decrease in the amount of heat absorbed by the base metal in raising the edges to the temperature required for welding. Because of the smaller V required and because of the greater efficiency of the new procedure, economies in rod and gases have been effected, amounting to as much as 25 to 50 per cent of the quantities used formerly.

Almost Automatic

In addition to the adaptability of the new process to the ordinary type of blowpipe which was used in the experimental work and in the construction of a considerable mileage of oil and gas pipe lines, the welding has been made almost automatic by the development of a special blowpipe for exclusive use with this new welding method. It is possible, with the new blowpipe, to obtain a further increase in welding speed of 30 to 50 per cent over that obtained with the hand blowpipe. The new welding method as applied with the special blowpipe is thus 3 to 3½ times as fast as previous methods of oxyacetylene welding. Although special principles in the new blowpipe are partially responsible for the increased speed of welding, the greater efficiency is due in a large part to the semiautomatic nature of the welding.

The principal feature of the blowpipe is an automatic gravity feed rod holder which is aligned in the same plane with two flames, the lower one of which is used for preparing the base metal for proper fusion and for actually melting the end of the welding rod while the upper flame, the smaller one of the two, is used for preheating the welding rod. The preheating flame is arranged so that the inner cone impinges directly upon the rod, which is preheated to a bright cherry red; thus little additional heat from the welding flame is required to melt it into the welding puddle. The welding operation is carried on by what is commonly known as the backhand method wherein the completed weld is on the opposite side of the rod from the welding flame. Sufficient heat comes back past the end of the welding rod to keep the puddle in a fluid condition long enough to permit complete escape of gases and a uniform solidification of the deposited weld metal. The position of the operator during the welding is such that he may work with a minimum of fatigue. Since only one hand is required to guide the blowpipe, the operator is free to make any necessary adjustments to the flame, lift or change the rod or signal the helper with his free hand and, if he wishes, he can shift the blowpipe to the other hand without any interruption to the welding operation. A lifting device controlled by a trigger on the blowpipe handle permits the operator to raise or lower the welding rod as required in starting, passing over tack-welds, changing the rod and in finishing. The possible travel of the lifter is about 2½ inches, giving the operator perfect control of the rod which is free to feed into the weld when the trigger is forward, and is gripped by the device and raised when the trigger is pulled back.

Method of Manipulation

Practically the only manipulation required with this blowpipe is a slight raising or lowering of the handle. By lowering the handle the main welding flame is brought to impinge more directly on the base metal in order to prepare it more quickly for fusion; by raising the handle the flame impinges more directly on the rod, accelerating rod melting when desired, thus producing a controllable and efficient balance between preparation and welding rod deposition. As the welding progresses forward, the operator can at all times see both sides and the bottom of the V and is consequently better able to control the quality of the weld. Due to the fluidity of the puddle, welds can be made with the special blowpipe only when the base metal adjacent to the V is in a horizontal or very nearly horizontal plane. Position welds can, however, be readily made with the hand blowpipe.

The importance of one of the primary features of the new welding method has been brought out clearly in the field application of the process. Often in the field the scarfs of the joints are in poor condition for welding; the steel is either rusty or the surfaces of the scarfs may be uneven or grooved. In such an event, the welding operator reduces the amount of excess acetylene in the welding flame slightly and melts away just enough of the steel surface to expose sound base metal. The carbon deposited from the flame is of very great importance at such a time in reducing oxide on the scarf surfaces and in facilitating positive fusion of the puddle and base metal.

It is significant that the results obtained through the development of this new method of welding greatly exceeded the expectations which were held at the beginning of the investigation. The desire had been to improve the quality of weld metal so that joints of proper efficiency could be produced for the high strength, higher carbon pipe which was coming into general use for pipe line construction, particularly for large diameter gas lines where the ability to lay lines with thin wall pipe was often the deciding factor in the promotion of large projects. When the experimental work was completed, however, weld strength had not only been increased to match that of the new high strength pipe but unlooked-for results in the way of greater speed and economy of welding were accomplished as well, an important contribution to the greater facility and lowered cost of joining steel.

Kansas Fields

(Continued from Page 53)

Siliceous lime, are given following potentials by counties:

	Wells	Potential
Rice County	20	17,378
Ellsworth County	19	25,115
Stafford County	4	4,900
Barton County	4	1,848
Rush County	1	50
Total	48	49,291

Ritz Canton Production Down

The production in the Ritz-Canton-Decker Field in McPherson County was reduced October 6, on account of decreased nominations of purchasing companies, according to L. R. Pickrell. The Viola lime wells will be allowed to produce 8 6 per cent of their potential daily production instead of 9.6 per cent which was allowed from October 1 to October 6. The chat producing wells were reduced to 7.6 per cent of their potential production from their previous allowable of 8.6 per cent. The total pipe line nominations of the area were 17,300 bbls. daily. The percentages given will continue until such a time as pipe line nominations or new wells necessitates a change.

Barton County

Rankin and others' No. 1 Sooey, C SW NE Section 34-18-12w, is a rig.

Cowley County

Roth & Farout's No. 1 Craig, SE cor. Section 2-32-4, is a location. Same company's No. 4 Southwestern College, NE cor. SW SE Section 22-32-4, made 30 bbls. from 3,311-23 feet.

Coffey County

A. F. Baker's No. 1 Hertig, NW cor. SW NW Section 31-21-14, was abandoned at 2,200 feet.

Douglass County

Pure Oil Co.'s No. 1 Leuf, NW cor. SE Section 31-14-19, was abandoned at 1,450 feet.

Ellsworth County

Brim and others' No. 1 Horeuse, SW cor. SE NE Section 17-16-10w, is a location. Derby Oil Co. and others' No. 1 Ploog, NE cor. NW SE Section 12-17-10w, is a rig. Viking Oil Co.'s No. 1 Satran, C NW SW Section 5-14-9w, made 750,000 feet of gas from 1,380-85 feet.

Greenwood County

Goodwin and others' No. 1 Klingsmith, C NW SW Section 30-24-13, old well drilling deeper, total depth 1,722 feet. Matthew & Rex's No. 3 Newswanger, NW cor. NE SW Section 8-24-12, is a location. Shull Drilling Co.'s No. 4 Johnson, C E half NW Section 16-24-12, is machine. Henderson & Holden's No. 4 Hess, NW cor. SE NW Section 34-22-11, was drilling at 500 feet. A. M. Landon's No. 5 Smith, SE cor. SW NW Section 8-24-12, was spudding. Ward McGinnis' No. 2, NE cor. SE NE Section 17-24-12, was drilling at 300 feet. Dalton and others' No. 1 Sauder, CNL NW NW Section 19-23-13, is a machine. Theta Oil Co.'s No. 11 Frankhouser, NE cor. NW SW Section 23-22-12, made 80 bbls. from 1,670-1,707 feet. Ward McGinnis' No. 1 B. Gaffney, SW cor. NE NE Section 18-24-11, was abandoned at 1,904 feet. Sinclair Prairie Oil Co.'s No. 2 Davis, SW cor. SE SE Section 6-24-12, made 20 bbls. from 1,795-1,816 feet. Matthews & Rex's No. 1 in the CNL NE NE Section 7-24-12, made 125 bbls. from 1,725-39 feet. Frasier and others' No. 1 Smith, NE cor. NW SW Section 8-24-12, made 100 bbls. from 1,712-32 feet.

Harvey County

J. Mabee and others' No. 2 Martens, SE cor. NE NE Section 19-22-3w, is a location. Skelly Oil Co.'s No. 1 Martens, SE cor. Section 19-22-3w, is a rig. W. B. McBride, Inc.'s No. 3 Friesen, SW cor. NW SW Section 20-22-3w, was drilling at 700 feet.

McPherson County

Hinkle and others' No. 1 Pfieffer, SW cor. SE NE Section 14-19-1, was digging cellar. J. H. Reed and others' No. 1 Keefer, NW cor. SW NE Section 21-19-1w, old well drilling deeper, total depth 1,583 feet. Whan and others' No. 1 Nelson, NW cor. SE Section 18-19-2w, is a location. Aldrich and others' No. 1 Stromquist, SW cor. SE SE Section 2-19-3w, is a location. Mabee and others' No. 1 Koehn, NW cor. SW NE Section 33-21-3w, is a location. Vernon and United Petroleum Co.'s No. 1 in SW cor. NW Section 35-19-1w, is a rig. Swaetz and others' No. 1 in the NW cor. NE SE Section 12-19-3w is a location. R. E. Garden and others' No. 1 Decker, NW cor. NE NW Section 11-20-3w, is a rig. Shell Petroleum Corp. and others' No. 1 Lively, SE cor. NW NW Section 21-19-1w, made 55,750,000 feet of gas from 2,916-58 feet. Foraker and others' No. 1 Tinsley, NW cor. SW Section 5-20-1w, was abandoned at 3,500 feet. Marileen and others' No. 3 Munn, NE cor. SE SW Section 6-20-1w, made 818 bbls. from 3,403-11 feet. Lario Oil & Gas Co.'s No. 1 Ritz, NE cor. SW Section 1-20-2w, was abandoned at 3,454 feet.

Reno County

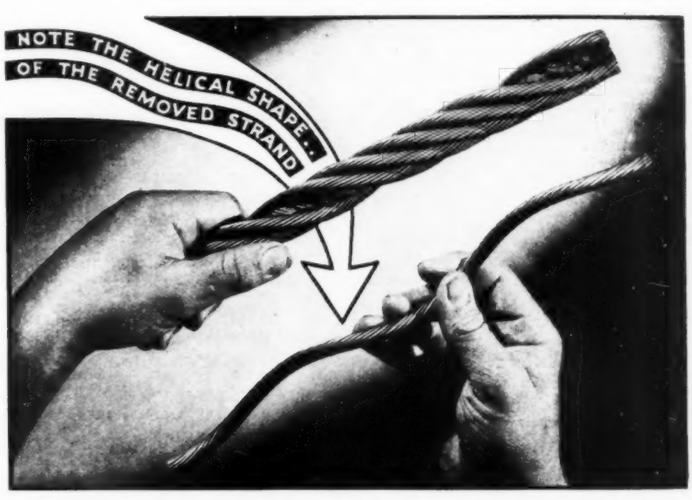
Gypsy Oil Co.'s No. 1 Krehbiel, C NW NE Section 35-23-4w, is a location. Olson and others' No. 2 Blake, C NE SE Section 23-23-4w, was drilling at 700 feet. Olson Oil Co. and others' No. 1 Fast, C NE NE Section 25-23-4w, made 550 bbls. from 3,268-3,370 feet. Martin and others' No. 1 Yoder, C NW NW Section 15-24-5w, was abandoned at 325 feet.

Rice County

Lebow & Weaver's No. 1 Collis, SW SE Section 16-19-9w, is a rig.

Woodson County

Theta Oil Co.'s No. 4 Shaffer, NW cor. SW SE Section 31-23-14, was spudding. Ward McGinnis' No. 2 in the NE cor. SW Section 31-23-14 was drilling at 250 feet. Nye and Kelly's No. 2 Shaffer, CEL SE SW Section 31-23-14, made 165 bbls. of oil in 12 hours from 1,570-77 feet.



LAY-SET LOWERS ROTARY DRILLING COSTS

● because in Lay-Set *Pre*formed Rotary Lines, internal stress is eliminated by *pre*forming strands and wires so they lie normally in position.

This illustration, made from an actual unretouched photograph, shows how the removed strand holds its helical shape. Note also that the end is not seized . . . the other strands having no tendency to straighten out or unravel. Lower your costs for Rotary Drilling Lines, Sucker Rod Lines, Swabbing Lines and Tubing Lines. Specify "Lay-Set" *Pre*formed on your next order.

HAZARD WIRE ROPE COMPANY
WILKES-BARRE, PENNSYLVANIA
1112 Fair Building Fort Worth, Texas

HAZARD LAY-SET
PREFORMED WIRE ROPE

Bureau of Mines Petroleum Statistics, Month of August, 1932

SUPPLY AND DEMAND OF ALL OILS

(Including wax, coke and asphalt in thousands of barrels of 42 U. S. gallons)

NEW SUPPLY:	August, 1932	July, 1932	August, 1931	Jan.-Aug., 1932	Jan.-Aug., 1931
Domestic production:					
Crude petroleum	66,220	66,310	68,014	530,162	566,623
Daily average	2,136	2,139	2,194	2,173	2,332
Natural gasoline	2,819	2,812	3,224	24,312	30,162
Benzol*	77	80	137	782	1,308
Total production	69,116	69,202	71,375	555,256	598,093
Daily average	2,230	2,232	2,302	2,276	2,461
Imports:					
Crude petroleum	1,862	1,525	2,702	35,631	31,799
Refined products	1,572	897	2,228	24,745	25,947
Total new supply, all oils	72,550	71,624	77,305	615,632	655,839
Daily average	2,340	2,310	2,494	2,523	2,699
Increase in stocks, all oils	†6,379	800	†14,679	†10,669	†32,180
DEMAND:					
Total demand	78,929	70,824	91,984	626,301	688,019
Daily average	2,546	2,285	2,967	2,567	2,831
Exports:					
Crude petroleum	2,839	2,249	2,856	19,267	17,330
Refined products	5,650	4,928	8,713	54,101	68,818
Domestic demand	70,440	63,647	80,415	552,933	601,871
Daily average	2,272	2,053	2,594	2,266	2,477
Excess of daily average domestic production over domestic demand	‡42	179	‡292	10	‡16
STOCKS (end of month):					
Crude petroleum:					
East of California	314,861	317,980	339,056	314,861	339,056
California§	40,149	40,405	42,300	40,149	42,300
Total refinable crude	355,010	358,385	381,356	355,010	381,356
Natural gasoline	3,690	3,890	3,214	3,690	3,214
Refined products§	262,208	265,012	249,912	262,208	249,912
	620,908	627,287	634,482	620,908	634,482
Days' supply	244	275	214	242	224
Bunker oil (included above in domestic demand)	3,066	3,248	3,442	26,372	30,436

*Based upon production of coke reported to Coal Division by those by-product coke plants that recover benzol products. †Decrease. ‡Deficiency. §California heavy crude and residual fuel included under refined products.

COMPARATIVE ANALYSES

(Thousands of barrels of 42 U. S. gallons)

	Aug., 1932 Total	Aug., 1932 Daily av.	July, 1932 Total	July, 1932 Daily av.	Jan.-Aug., 1932	Jan.-Aug., 1931
CRUDE PETROLEUM:						
Runs to stills: Domestic	63,799	2,058	67,374	2,173	527,590	567,226
Foreign	3,472	112	4,081	132	30,294	31,845
Total	67,271	2,170	71,455	2,305	557,884	599,071
Imports	1,862	60	1,525	49	35,631	31,799
Exports	2,839	92	2,249	73	19,267	17,330
MOTOR FUEL:						
Production	33,564	1,083	34,288	1,106	268,107	289,576
Imports	111	4	64	2	7,809	9,805
Exports	2,366	76	2,363	76	25,980	32,466
Stocks*	52,858	.....	56,936 †56,756	.....	52,858	36,405
Domestic demand	35,207	1,136	31,317	1,010	248,309	270,608
KEROSENE:						
Production	3,497	113	3,629	117	29,026	27,978
Imports	1	.....	.....	.....	11	10
Exports	1,005	32	876	28	7,278	8,488
Stocks	6,247	.....	6,033	.....	6,247	6,734
Domestic demand	2,279	74	1,854	60	20,844	19,649
GAS OIL AND FUEL OIL:						
Production	23,312	752	24,717	797	199,592	227,588
Transfers‡	787	25	‡213	‡7	3,810	(¶)
Imports	1,451	47	816	26	16,734	16,011
Exports	1,409	45	1,217	39	14,301	20,295
Stocks	136,695	.....	136,017	.....	136,695	138,978
Domestic demand	21,463	692	‡20,401	‡658	202,996	(¶)
LUBRICANTS:						
Production	1,587	51	1,958	63	15,803	18,081
Imports	.....	.....	.....	.....	11	23
Exports	662	21	279	9	4,869	5,482
Stocks	7,965	.....	7,991	.....	7,965	9,289
Domestic demand	951	31	1,011	33	12,465	14,304
WAX (thousands of pounds):						
Production	38,920	1,255	31,640	1,021	322,560	297,080
Imports	1,815	59	2,184	70	26,349	21,277
Exports	19,103	616	14,032	453	137,848	173,584
Stocks	206,461	....	202,023	.....	206,461	192,198
Domestic demand	17,194	555	16,295	526	175,820	185,167
COKE (short tons):						
Production	150,200	4,845	152,500	4,919	1,187,800	1,357,100
Stocks	1,514,500	.....	1,544,200	.....	1,514,500	1,450,500
ASPHALT (short tons):						
Production	231,500	7,468	234,000	7,548	1,623,200	1,995,300
Imports (natural)	1,000	32	1,500	48	16,000	.....
Stocks	298,000	.....	386,300	.....	298,000	314,900
ROAD OIL:						
Production	1,273	41	1,410	45	5,272	3,824
Stocks	991	.....	1,096	.....	991	446
STILL GAS:						
Production	3,626	117	3,763	121	27,410	24,761
MISCELLANEOUS:						
Production	127	4	‖170	‖5	3,338	2,882
Stocks	511	.....	499	.....	511	661

*Stocks of motor fuel in 1932 include terminal and transit stocks, †180,000 bbls. of gasoline transferred to unfinished oils in Kansas. ‡Crude used as fuel or transferred to fuel oil stocks in California (1932 only). §Revised. ¶Not available. ‖Minus quantity.

INDICATED DOMESTIC DEMAND FOR CRUDE PETROLEUM EAST OF CALIFORNIA

(Thousands of barrels of 42 U. S. gallons)

Domestic petroleum by fields of origin:	Aug., 1932 Total	Aug., 1932 Daily av.	July, 1932 Total	July, 1932 Daily av.	Jan.-Aug., 1932	Jan.-Aug., 1931
Appalachian:						
Pennsylvania Grade	1,836	59	1,724	56	14,344	15,031
Other (Inc. Kentucky)	844	27	674	22	5,703	5,716
Lima-NE Ind.- Mich.	765	25	750	24	5,290	2,837
Ill.-SW Ind.	373	12	214	7	2,572	4,173
Mid-Continent:						
N. La. and Ark.	1,905	61	2,591	83	17,914	22,481
W. Tex.-SE N. Mex.	6,289	203	5,956	192	55,478	73,074
Other (Okla., Kans., N. Tex., etc.)	34,349	1,108	36,329	1,172	282,906	284,352
Gulf Coast	4,761	154	4,671	151	33,985	45,364
Rocky Mountain	1,456	47	1,548	50	10,306	15,524
California	....	....	....	....	....	5
Total demand	52,578	1,696	54,457	1,757	428,498	468,557
Exports	2,194	71	1,513	49	12,810	11,748
Domestic demand	50,384	1,625	52,944	1,708	415,688	456,809
Foreign petroleum	3,783	122	3,615	117	30,827	31,855
Total domestic demand east of California	54,167	1,747	56,559	1,825	446,515	488,664

PRODUCTION OF CRUDE PETROLEUM BY STATES

(Thousands of barrels of 42 U. S. gallons)

	August, 1932 Total	August, 1932 Daily av.	July, 1932 Total	July, 1932 Daily av.	Jan.-Aug., 1932	Jan.-Aug., 1931
Arkansas	989	32	1,032	33	8,019	10,629
California:						
Kettleman Hills	1,869	60	1,901	61	14,666	10,183
Long Beach	2,250	73	2,196	71	18,905	26,797
Santa Fe Springs	1,822	59	1,799	58	15,361	16,663
Rest of State	8,899	287	8,732	282	71,480	79,795
Total California	14,840	479	14,628	472	120,412	127,438
Colorado	86	3	94	3	823	1,050
Illinois	408	13	397	13	3,411	3,281
Indiana:						
Southwestern	71	2	71	2	566	537
Northeastern	2	...	2	...	21	26
Total Indiana	73	2	73	2	587	563
Kansas	2,983	96	2,855	92	32,960	24,556
Kentucky	578	18	549	18	4,159	4,151
Louisiana:						
Gulf Coast	950	31	935	30	7,430	6,110
Rest of State	883	28	864	28	6,696	8,784
Total Louisiana	1,833	59	1,799	58	14,126	14,894
Michigan	646	21	601	19	4,164	2,126
Montana	221	7	228	7	1,741	1,957
New Mexico	987	32	1,101	36	8,806	9,953
New York	304	10	297	10	2,439	2,111
Ohio:						
Central and east.	300	10	285	9	2,403	2,846
Northwestern	94	3	91	3	740	755
Total Ohio	394	13	376	13	3,143	3,601
Oklahoma:						
Oklahoma City	2,250	73	2,886	93	24,367	31,586
Seminole	3,539	114	3,636	117	29,689	33,982
Rest of State	6,805	219	6,553	212	51,228	59,220
Total Oklahoma	12,594	406	13,075	422	105,284	124,788
Pennsylvania	1,051	34	1,027	33	8,514	7,400
Tennessee	...	...	1	...	4	5
Texas:						
Gulf Coast	3,729	120	3,490	113	26,388	33,504
West Texas	5,329	172	5,441	175	43,468	54,503
East Texas	10,210	329	10,444	337	81,771	62,489
Rest of State	7,429	240	7,321	236	58,016	64,026
Total Texas	26,697	861	26,696	861	209,643	214,822
West Virginia	337	11	319	10	2,669	2,942
Wyoming:						
Salt Creek	662	22	663	22	5,480	6,090
Rest of State	537	17	499	16	3,778	4,206
Total Wyoming	1,199	39	1,162	38	9,258	10,296
Total U. S.	66,220	2,136	66,310	2,139	530,162	566,623

PRODUCTION OF CRUDE PETROLEUM BY FIELDS

(Thousands of barrels of 42 U. S. gallons)

FIELD:	August, 1932 Total	August, 1932 Daily av.	July, 1932 Total	July, 1932 Daily av.	Jan.-Aug., 1932	Jan.-Aug., 1931
Appalachian:						
Penna. Grade	1,835	59	1,785	58	14,807	13,914
Other (inc. Ky.)	735	24	693	22	5,381	5,571
Lima.-NE Ind.-Mich	742	24	694	22	4,925	2,961
Ill.-SW Ind.	479	15	468	15	3,977	3,818
Mid-Continent:						
N. La.-Ark.	1,872	60	1,896	61	14,715	19,404
W Tex.-SE N. Mex.	6,279	202	6,504	210	52,006	64,143
Other (Okla., Kans., N. Tex., etc.)	33,216	1,071	33,695	1,087	268,031	275,859
Gulf Coast	4,679	151	4,425	143	33,818	39,914
Rocky Mountain	1,543	50	1,522	49	12,090	13,661
California	14,840	479	14,628	472	120,412	127,438
Total	66,220	2,136	66,310	2,139	530,162	566,623

IMPORTS AND EXPORTS OF CRUDE PETROLEUM AND MAJOR REFINED PRODUCTS*

(Thousands of barrels of 42 U. S. gallons)

	Aug., 1932	July, 1932	Aug., 1931	Jan.-Aug., 1932	Jan.-Aug., 1931
CRUDE PETROLEUM:					
Imports	1,862	1,525	2,702	35,631	31,799
From Mexico	132	61	493	5,975	5,485
From Venezuela	1,340	1,240	1,709	20,690	17,454
From Colombia	315	145	438	7,928	7,833
From other countries	75	79	62	1,038	1,027
Exports:	2,839	2,249	2,856	19,267	17,330
Domestic crude oil:					
To Canada	1,876	1,593	1,754	13,273	13,003
To other countries	963	656	1,102	5,991	4,327
Shipments	....	....	....	3	....
REFINED PRODUCTS:					
Gasoline:					
Imports	111	64	1,244	7,809	9,805
Exports†	2,366	2,363	4,210	25,980	32,466
To United Kingdom	628	276	895	8,016	9,842
To France	345	412	1,143	3,382	4,608
To Canada	274	240	278	1,565	2,040
To other countries	1,025	1,276	1,796	12,029	15,103
Shipments	94	159	98	988	873
Kerosene:					
Exports	1,005	876	1,144	7,278	8,488
To China	243	137	167	1,018	1,222
To United Kingdom	77	292	150	1,731	1,891
To other countries	678	429	814	4,405	5,251
Shipments	7	18	13	124	124
Gas oil and fuel oil:					
Imports	1,451	816	1,958	16,734	16,011
Exports	1,409	1,217	2,259	14,301	20,295
To Japan	253	399	494	3,658	3,740
To Netherlands	76	64	155	456	561
To other countries	829	688	1,558	8,554	14,057
Shipments	251	66	192	1,633	1,937
Lubricants:					
Exports	662	279	863	4,869	5,482
To United Kingdom	144	16	226	1,168	1,177
To France	80	51	147	701	895
To other countries	433	202	481	2,947	3,351
Shipments	5	10	9	53	59
Wax (thousands of pounds):					
Imports	1,815	2,184	3,026	26,349	21,277
Exports	19,103	14,032	20,914	137,848	173,584
To United Kingdom	4,671	2,719	5,126	38,359	38,809
To Italy	3,577	1,542	1,598	19,495	26,914
To other countries	10,852	9,699	14,185	79,907	107,840
Shipments	3	72	5	87	21

*From the Bureau of Foreign and Domestic Commerce. †Includes benzol—exactly 9,639 bbls. in August, 1932.

NUMBER OF WELLS COMPLETED IN THE UNITED STATES*

	Aug., 1932	July, 1932	Aug., 1931	Jan.-Aug. 1932	Jan.-Aug. 1931
Oil	1,145	1,279	441	7,066	4,020
Gas	71	72	135	681	1,406
Dry	290	362	218	2,223	2,734
Total	1,506	1,713	794	9,970	8,160

*From The Oil and Gas Journal and California office of American Petroleum Institute.

RECORD OF WELLS FOR IMPORTANT FLUSH FIELDS, AUGUST, 1932*

	Completions Oil	Gas	Dry	Total initial prod., (bbls.)	Aver. initial prod., (bbls.)	Drilling Aug. 31
Texas	843	15	147	1,624,900	1,200	884
East Texas†	669	...	10	1,471,800	2,200	256
Gulf Coast	33	2	17	20,000	600	113
West Texas	16	...	3	3,900	200	95
California	12	...	16	21,600	1,800	105
Kettleman Hills	2	...	...	17,200	8,600	12
Long Beach	2	...	3	500	300	2
Playa Del Rey	....	...	...	.....	....	3
Oklahoma	57	3	24	88,900	1,600	266
Oklahoma County	14	...	...	77,000	5,500	58
Pottawatomie and Seminole Counties	9	...	5	5,700	600	16
New Mexico	2	1	1	3,100	1,600	54
Lea County (Hobbs)	1	...	...	3,000	3,000	9
Other states	231	52	102	28,000	100	1,013
Total United States	1,145	71	290	1,666,500	1,500	2,322

*From The Oil and Gas Journal and California office of American Petroleum Institute. †Initial production for the East Texas Field calculated from field reports.

STOCKS OF CRUDE PETROLEUM
(Thousands of barrels of 42 U. S. gallons)

EAST OF CALIFORNIA:	Aug. 31, 1932	July 31, 1932	Aug. 31, 1931
At refineries by location:			
East Coast: Domestic	9,822	9,655	9,660
Foreign	7,644	9,149	2,964
Appalachian	2,174	2,246	2,176
Indiana, Illinois, Kentucky, Michigan	4,015	3,966	3,983
Oklahoma, Kansas and Missouri	4,842	5,074	5,144
Texas: Inland	1,352	1,459	2,001
Gulf Coast: Domestic	7,238	6,846	6,808
Foreign	128	175	191
Louisiana Gulf Coast: Domestic	2,259	2,061	3,878
Foreign	1,526	1,895	642
Arkansas and Inland Louisiana	667	529	692
Rocky Mountain	1,620	1,586	1,680
Total	43,287	44,641	38,925
At refineries by origin:			
Pennsylvania Grade	2,143	2,151	1,914
Other Appalachian (inc. Kentucky)	687	770	631
Lima-N. E. Indiana-Michigan	278	212	205
Illinois-S. W. Indiana	90	116	112
North Louisiana and Arkansas	1,517	1,289	2,583
West Texas and S. E. New Mexico	4,562	4,086	3,399
Oklahoma, Kansas, North Texas, etc.	18,088	18,752	18,712
Gulf Coast	5,064	4,522	5,887
Rocky Mountain	1,560	1,524	1,680
Foreign	9,298	11,219	3,797
Total	43,287	44,641	38,925
Pipe line and tank farm:			
Pennsylvania Grade	4,936	4,929	4,874
Other Appalachian (inc. Kentucky)	869	895	920
Lima-N. E. Indiana-Michigan	1,176	1,265	1,412
Illinois-S. W. Indiana	11,233	11,103	9,866
North Louisiana and Arkansas	14,031	14,279	18,809
West Texas and S. E. New Mexico	30,641	31,123	38,490
Oklahoma, Kansas, North Texas, etc.	164,460	164,955	182,141
Gulf Coast	13,061	13,697	14,069
Rocky Mountain	25,317	25,243	23,350
Total	265,724	267,489	294,531
Total refinery, pipe line, and tank farm	309,011	312,130	333,456
Producers'	5,850	5,850	5,600
Total crude east of California	314,861	317,980	339,056
CALIFORNIA: Light	40,149	40,405	42,300
Total refinable crude in the U. S.	355,010	358,385	381,356

STOCKS HELD BY REFINING COMPANIES, AUGUST 31, 1932
(Thousands of barrels of 42 U. S. gallons)

	Gasoline At refineries	At bulk terminals	Total	Kerosene	Gas oil and distillate fuels	Residual fuel oils
East Coast	5,664	10,247	15,911	1,449	3,143	6,048
Appalachian	1,326	511	1,837	251	605	466
Ind., Ill., Ky., etc.	4,517	2,430	6,947	609	1,996	2,723
Okla., Kans., Mo.	3,062	1,061	4,123	313	1,440	2,726
Texas Inland	1,622	61	1,683	118	501	2,755
Texas Gulf	4,189	315	4,504	1,406	2,972	7,068
Louisiana Gulf	1,579	252	1,831	308	847	4,108
Ark. and La. Inland	155	89	244	15	110	556
Rocky Mountain	1,723	....	1,723	204	241	379
California	12,863	(*)	12,863	1,574	5,116	†94,895
Total	36,700	14,966	51,666	6,247	16,971	121,724

	Wax (thousands of pounds) Lubricants	Crude scale	Refined	Total	Coke (tons)
East Coast	2,596	29,163	28,819	57,982	45,400
Appalachian	982	18,413	5,229	23,642	11,500
Ind., Ill., Ky., etc.	810	26,933	1,859	28,792	156,300
Okla., Kans., Mo.	531	3,062	1,847	4,909	193,600
Texas Inland	78	.....	282	282	159,300
Texas Gulf	1,782	2,952	12,473	15,426	606,100
Louisiana Gulf	57	41,911	1,014	42,925	97,600
Ark. and La. Inland	15	.....	....	.....	200
Rocky Mountain	222	31,152	1,351	32,503	139,600
California	892	.....	.....	.....	104,900
Total	7,965	153,587	52,874	206,461	1,514,500

	Asphalt (tons)	Road oil	Miscellaneous products	Unfinished oils	Natural gasoline
East Coast	113,400	161	82	8,664	21
Appalachian	19,100	68	35	1,671	1
Ind., Ill., Ky., etc.	52,500	159	146	5,836	31
Okla., Kans., Mo.	3,000	160	16	3,469	22
Texas Inland	.....	34	6	1,182	6
Texas Gulf	5,600	14	9	11,296	167
Louisiana Gulf	39,500	14	4	1,957	....
Ark. and La. Inland	16,700	3	6	593	3
Rocky Mountain	2,900	116	16	1,819	3
California	45,300	262	190	‡8,354	2,819
Total	298,000	991	511	44,841	3,074

*Included with "at refineries." †Includes heavy crude. ‡Includes 4,811,000 bbls. topa.

RUNS TO STILLS AND OUTPUT OF REFINERIES, AUGUST, 1932
(Thousands of barrels of 42 U. S. gallons)

INPUT—	Crude oil Domestic	Foreign	Total	Unfinished oils rerun	Natural gasoline	Total input
East Coast	10,061	3,333	13,394	939	21	14,354
Appalachian	2,824	.....	2,824	272	26	3,122
Ind., Ill., Ky., etc.	8,829	.....	8,829	590	147	9,566
Okla., Kans., Mo.	7,458	.....	7,458	449	416	8,323
Texas Inland	4,163	.....	4,163	100	347	4,610
Texas Gulf	11,175	47	11,222	896	225	12,343
Louisiana Gulf	2,831	92	2,923	132	67	3,122
Ark. and La. Inland	1,477	.....	1,477	317	76	1,870
Rocky Mountain	1,454	.....	1,454	137	80	1,671
California	13,527	.....	13,527	576	*735	14,838
Total	63,799	3,472	67,271	4,408	2,140	73,819

OUTPUT—	Gasoline	Kerosine	Gas oil and distillate fuels	Residual fuel oils	Lubricants	Wax (thousands pounds)
East Coast	5,650	612	1,000	4,107	478	15,120
Appalachian	1,359	264	100	202	366	6,720
Ind., Ill., Ky., etc.	5,465	345	496	866	143	5,040
Okla., Kans., Mo.	4,447	542	411	1,302	172	2,240
Texas Inland	2,443	161	211	1,307	19	280
Texas Gulf	5,276	522	1,650	2,826	224	1,960
Louisiana Gulf	1,308	337	205	724	21	6,160
Ark. and La. Inland	734	47	151	488	17	... ..
Rocky Mountain	730	41	73	312	16	1,400
California	5,471	626	1,222	5,659	131	.....
Total	†32,883	3,497	5,519	17,793	1,587	38,920

OUTPUT (continued)—	Coke (tons)	Asphalt (tons)	Road oil	Still gas	M'scellaneous	Unfinished products	Shortage
East Coast	15,700	110,600	154	799	20	564	226
Appalachian	4,700	13,300	29	214	17	321	129
Ind., Ill., Ky., etc.	66,500	30,000	405	691	30	554	49
Okla., Kans., Mo.	22,100	4,500	205	336	4	413	345
Texas Inland	3,900	.....	28	90	6	118	206
Texas Gulf	21,400	12,400	21	859	3	539	239
Louisiana Gulf	6,700	16,200	14	139	34	115	80
Ark. and La. Inland	200	3,800	15	48	1	285	62
Rocky Mountin	8,800	.....	182	73	1	146	47
California	200	40,700	220	377	11	476	420
Total	150,200	231,500	1,273	3,626	127	3,531	1,805

*Includes 114,000 bbls. run through pipe lines. †Includes 477,000 bbls. special naphthas. comparable figure for July (including California), 488,000 bbls.

CRACKING OPERATIONS

Fresh cracking stocks charged to stills, 34,979,000 bbls.; gasoline produced by cracking, 14,442,000 bbls.; fuel oil produced by cracking, 11,375,000 bbls.

GASOLINE PRODUCTION BY THE VARIOUS METHODS—AUGUST, 1932
(Thousands of barrels of 42 U. S. gallons)

	Straightrun Total	Pct. (*)	Pct. (†)	Cracked Total	Pct. (*)	Pct. (†)	Nat. gasoline Total	Pct. (†)	Gasoline Total	Pct. (*)
East Coast	2,545	19.0	45.0	3,084	23.0	54.6	21	.4	5,650	42.0
Appalachian	714	25.3	52.5	619	21.9	45.6	26	1.9	1,359	47.2
Ind., Ill., etc.	2,550	28.9	46.7	2,768	31.3	50.6	147	2.7	5,465	60.2
Okla., Kans., Mo.	2,394	32.1	53.8	1,637	21.9	36.8	416	9.4	4,447	54.0
Texas Inland	1,415	34.0	57.9	681	16.3	27.9	347	14.2	2,443	50.3
Texas Gulf	2,186	19.5	41.4	2,865	25.5	54.3	225	4.3	5,276	46.0
Louisiana Gulf	575	19.7	44.0	666	22.8	50.9	67	5.1	1,308	42.5
Ark. and La. Inland	349	23.6	47.5	309	20.9	42.1	76	10.4	734	44.5
Rocky Mountain	356	24.5	48.8	294	20.2	40.3	80	10.9	730	44.7
California	3,217	23.8	58.8	1,519	11.2	27.8	735	13.4	5,471	35.0
Total	16,301	24.2	49.6	14,442	21.5	43.9	2,140	6.5	32,883	45.7

*Per cent of crude run. †Per cent of total gasoline output.

PRODUCTION OF MOTOR FUEL
(Thousands of barrels of 42 U. S. gallons)

	Aug., 1932 Total	Daily av.	July, 1932 Total	Daily av.	Jan.-Aug. 1932	Jan.-Aug. 1931
Straightrun gasoline	16,301	526	16,428	530	133,199	146,430
Cracked gasoline	14,442	466	15,205	490	113,561	115,202
Natural gasoline:						
Blended at refineries	2,026	65	1,964	63	15,743	22,858
Blended at plants*	44	.....	3	.....	27	109
Run through pipe lines†	114	4	108	4	888	668
Jobbers, exports, etc.	600	19	500	16	3,907	3,000
Benzol produced	77	3	80	3	782	1,308
Total motol fuel	33,564	1,083	34,288	1,106	268,107	289,576

*East of California. †To refineries in California.

SHIPMENTS OF MOTOR FUEL BY PIPE LINES
(Thousands of barrels of 42 U. S. gallons)

	Aug., 1932	July, 1932	Aug., 1931	Jan.-Aug. 1932	Jan.-Aug. 1931
Motor fuel turned into lines	2,722	2,254	1,847	19,069	6,943
Motor fuel delivered from lines	2,632	2,226	1,686	18,799	5,592
Shortage	12	5	20	45	35
Stocks in lines and working tanks end of each month	1,187	1,109	1,516	1,187	1,516

PRODUCTION AND DISTRIBUTION OF NATURAL GASOLINE
(Thousands of barrels of 42 U. S. gallons)

	Aug., 1932 Total	Daily av.	July, 1932 Total	Daily av.	Jan.-Aug. 1932	Jan.-Aug. 1931
Production	2,819	91	2,812	91	24,312	30,162
Decrease in all stocks	200	6	2	...	.....	.....
Total	3,019	97	2,814	91	24,312	30,162
Blended at refineries	2,026	65	1,964	63	15,743	22,858
Blended at plants east of Calif.	4	...	3	...	27	109
Run through pipe lines in Calif.	114	4	108	4	888	668
Jobbers, exports, etc.	600	19	500	16	3,907	3,000
Increase in all stocks	.....	...	.....	...	872	114
Balance	275	9	239	8	2,875	3,413
Total	3,019	97	2,814	91	24,312	30,162

SHIPMENTS FROM CALIFORNIA TO EASTERN PORTS IN UNITED STATES*
(Thousands of barrels of 42 U. S. gallons)

	Aug., 1932	July, 1932	Aug., 1931	Jan.-Aug. 1932	Jan.-Aug. 1931
Gasoline	505	934	854	5,972	9,265
Natural gasoline	....	....	152	217	1,173
Kerosene	77	....	30	208	194
Gas oil and Diesel oil	279	144	286	802	1,426
Fuel oil	21	....	....	21	3
Lubricants	....	9	4	28	67
Asphalt	....	1	1	6	12
Miscellaneous	....	15	....	55	....
Total	882	1,103	1,327	7,309	12,139

*Compiled by E. T. Knudsen of the San Francisco office of the Bureau of Mines.

PERSONAL PARAGRAPHS

W. A. Killmartin, of the Metal Hose & Tube Company, Brooklyn, N. Y., spent a few days in Tulsa last week.

* * *

George J. Walton, of Dallas, Tex., district manager, Emsco Derrick & Equipment Company, was in Tulsa recently.

* * *

Robert Connaghan of Cheyenne, Wyo., oil operator, is convalescent from a minor operation performed in a Cheyenne, Wyo., hospital.

* * *

C. F. Mullins, sales manager, Viking Pump Company, Cedar Falls, Iowa, stopped off in Tulsa while on a trip from the Pacific Coast and Texas fields.

* * *

J. B. Burnett, formerly chief geologist of the Lago Petroleum Corporation, at Maracaibo, Venezuela, has been appointed assistant manager of the company.

* * *

Dr. M. B. Blackler, manager of the Egyptian government's petroleum refinery at Suez, is on vacation in London, and will return to Egypt in November.

* * *

Paul Dumanois, director of technical services in the Office National des Combustibles Liquides, of France, has been elected an honorary member of the British Institution of Petroleum Technologists.

* * *

J. M. O'Melveney, Rocky Mountain representative of the Cleveland Pneumatic Tool Company, with Casper, Wyo., headquarters, is on a trip through the Mid-Continent oil fields, accompanied by Mrs. O'Melveney.

* * *

James Crawford of the engineering department of the Pan American Oil Company, is visiting friends in Wyoming. He has completed a hunting trip into the Jackson Hole country, and visited in Buffalo, Wyo., with friends.

* * *

D. A. Sutherland has returned to London, England, from a long visit to Egypt, Palestine and Trans-Jordan. He was accompanied by Dr. J. McClelland Henderson, who is staying on making a geological survey of the Dead Sea areas held by Mr. Sutherland.

* * *

Fred W. Crawford, of Columbus, Ohio, vice president of the Columbia Gas & Electric Company, president of Panhandle Eastern Pipe Line Company, and also president of the Ohio Fuel Supply Company, was a recent visitor in Oklahoma. He is on a tour of the Mid-Continent Field.

* * *

George H. Coxon, head of the refining and technical departments of the Anglo-Persian Oil Company, has left London for a tour of the properties of the Steau Romana, Ltd., in Rumania, of which company he is a director. Mr. Coxon will afterwards proceed to Persia and Iraq on Anglo-Persian Oil Company's matters.

* * *

Judge Charles E. Winter, attorney general of Porto Rico, who spent a week in Casper, Wyo., left for Cheyenne where he spent a day or so before leaving for the East and Washington. Judge Winter is president of the Domino Wyoming Oil Company, and one of the pioneer operators in the Salt Creek Field.

* * *

The following prominent petroleum engineers and geologists have been appointed to the executive committee of the Engineers' National Hoover Committee, Oklahoma division: J. R. McWilliams, chairman, Tulsa; Arthur J. Kerr, secretary-treasurer, Tulsa; W. H. Atkinson, Oklahoma City; E. O. Bennett, Ponca City; R. S. Knappen, Tulsa; D. R. Knowlton, Bartlesville; Sydney S. Smith, Tulsa; Dr. J. B. Umpleby, Norman; and C. D. Watson, Tulsa.

Phil Gardner, geologist, Amarillo, Tex., is now living in San Antonio, Tex.

* * *

Felix A. Vogel, consulting engineer and geologist, of Dolgeville, N. Y., has lately spent some time in Southwest Texas.

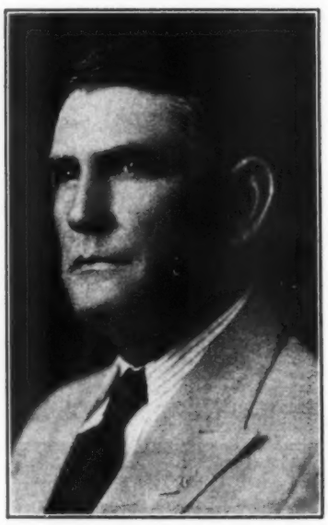
* * *

Roy O. Neal, consulting engineer of Tulsa, has just returned from a three weeks' trip on professional business in the Pacific Northwest.

* * *

J. David Hedley, geologist for the Barnsdall Oil Company at San Antonio, Tex., has been transferred to Houston, Tex., where he will open an office for the company.

Men of the Industry



BLAINE JOHNSTON

Blaine Johnston, general superintendent of production for the Simms Oil Company, was born near Mineral Wells, Tex., the oldest of seven brothers, all in the oil business. He started work in the oil fields at the age of 17 when, in 1903, he got a job as a roustabout at Spindletop. He had quit his previous job in White Wright, Tex., in disgust because out of his wage of 75 cents a day he had been required to pay for a crate of eggs which fell off a dray he was driving when the horses ran away.

From roustabout the young man was advanced to more important jobs, including cable-tool and rotary drilling, pipe lining and supervisory positions in production, eventually becoming general superintendent of the White Oil Corporation and its successor, the Crown Central Petroleum Corporation, of Houston, Tex. In the meantime his wanderings had taken him to Kentucky, Arkansas, Louisiana, Pennsylvania and Kansas, besides Texas. Mr. Johnston left the Crown Central Petroleum Corporation to become district superintendent for Simms, overseeing drilling and production operations for the company in East Texas, Louisiana and Arkansas territory. When W. L. Todd, vice president and general manager of production for Simms, resigned in April, 1930, Mr. Johnston was selected to fill the vacancy and he moved to Dallas, Tex.

Mr. Johnston married Miss Olive Jordan, of Center, Tex., and in June, 1932, their only son, Blaine Johnston, Jr., 6 feet tall and weighing 187 pounds, graduated with honors from high school in Dallas. Mr. Johnston's hobby is painting.

Carl A. Scholle, of the Ohio Injector Company, Wadsworth, Ohio, was in Tulsa during the past week.

* * *

C. A. Wagner, representing the Toledo Pipe Threading Machine Company, Toledo, Ohio, visited the Mid-Continent area recently.

* * *

James F. Corcoran, special representative, Trimont Manufacturing Company, Roxbury, Mass., is visiting East Texas and Gulf Coast points.

* * *

Captain Thomas S. Masterson, D.S.O., director in Rumania of the Phoenix Oil & Transport Company Ltd., has returned to Rumania from London.

* * *

Robert Bruce White, Standard Development Company, was in Tulsa last week. Mr. White left for Texas and will return to Tulsa in the near future.

* * *

Fred K. Foster, geologist, for seven years with the Sinclair Oil & Gas Company at Wichita Falls, Tex., is now in San Antonio, Tex., doing consulting geological work.

* * *

L. J. Daly, division superintendent of The Texas Company with Denver headquarters was in Casper, Wyo., in conference with the company's district superintendent, K. D. Pardee.

* * *

R. D. Matthews, executive vice president of the Union Oil Company of California, is in New York but will return to Los Angeles, Calif., via the Panama Canal about November 1.

* * *

C. E. Olmsted, vice president and general manager of The Texas Company of California, has left for the Orient, and will be away from headquarters until the latter part of November.

* * *

O. R. Jeffers has moved to San Antonio, Tex., where Jeffers Oil Company, Inc., has opened offices. The company recently moved from East Texas where it operated quite extensively.

* * *

Dwight A. Moore, of the Wilshire Oil Company, recently delivered a paper before the Los Angeles Petroleum Accountants Society on "Rights of Minority Stockholders in Reorganizations."

* * *

George McDonald, of New York City, director of the Consolidated Oil Company, has been selected as chairman of the board of the Home Loan Bank of Newark, N. J., serving New York and New Jersey.

* * *

L. P. St. Clair, president of the Union Oil Company of California, and vice chairman for the California oil industry of the President's Organization for Unemployment Relief, was recently appointed executive vice chairman of a committee appointed by the Los Angeles Chamber of Commerce to coordinate employment stabilization.

* * *

W. F. Bowman, who has been engaged in general geological consulting work in Houston, Tex., and the Gulf Coast for several years, has been named district land and geological representative of the Tidal Oil Company, which recently opened offices at Houston. M. W. Grimm, who had held the position since the office was opened, has returned to Shreveport, La., from where he was transferred. In his new work, Mr. Bowman becomes associated with a group of companies with which he formerly was connected for many years. He formerly was with the Associated Oil Company, which is affiliated with the Tide Water Oil Corporation, parent of the Tidal Oil Company, and with which company he started in California and later was transferred to Houston in charge of the Gulf Coast district. When the Associated Oil Company closed its Houston office, Mr. Bowman went into the consulting business with John M. Vetter, now with the Rio Bravo Oil Company.

MODERN business moves in fast tempo —which only emphasizes the discord when the wrong note is struck. In the development of a Natural Gas System, speed is essential and no false steps can be taken. For not only will they slow up progress; large capital losses may be incurred, and ultimate earning power be reduced or impaired—for the structure will lack that stability which makes for profitable permanence.

TWENTY-FIVE years of specialization in Natural Gas—hundreds of contracts successfully executed—thousands of miles of pipe-lines laid and in service today—this comprises the experience which has taught the Hope Engineering Company how to move swiftly but surely in all matters entrusted to it. Its organization of time-tested specialists is always complete, and ready for the signal that will put its diverse activities in motion.

HOPE ENGINEERING COMPANY

Engineers and Contractors in Pipe Line Construction

FIELD AND MARKET ANALYSIS · ENGINEERING COUNSEL AND DESIGN · ORGANIZATION AND FINANCE
CONSTRUCTION AND EQUIPMENT · MANAGEMENT AND OPERATION

Mount Vernon, Ohio - New York, N. Y.

· AMERICAN INDUSTRY NEEDS MORE NATURAL GAS ·

NATURAL GAS DEVELOPMENTS

Governor Sterling Vetoes Gas Rate Review Measure

AUSTIN, Tex., Oct. 17.—A bill passed by the third extraordinary session of the Texas legislature which would have empowered the State Railroad Commission to make inventories of gas properties in towns of less than 5,000 population for rate-fixing purposes has been vetoed by Governor Sterling.

The gas bill was sponsored by Senator J. J. Loy of Sherman.

The governor said he disapproved the bill because "in my opinion it would interfere materially with the passage of a general utility bill at the next session of the legislature.

"I am heartily in favor of general utility regulation and feel that all utility companies should be regulated by the state," the governor said. "At this time, gas companies are the only utility companies that are being regulated and, further, the clause in this bill that relates to industrial gas would interfere with the right of contract. Many industrial concerns have contracted for their fuel supply and have based their operations upon these contracts.

"I am sure that, if the legislature had been conversant with the effect of the amendment placed upon this bill that relates to industrial gas they would not have passed it. My information is that this bill was hastily passed and amendments were placed thereon without having committee hearings. Some of the members of the legislature have since requested that this bill be vetoed on account of its hasty passage and because they did not have time to familiarize themselves with its real meaning and effect."

Michigan Gas Completion Makes 4,400,000 Feet Daily

MOUNT PLEASANT, Mich., Oct. 17. The available natural gas supply in Central Michigan was boosted with the completion of a 4,400,000 feet per day well in No. 2 Bartlett-McClintic in Broomfield Township, Isabella County. The well was drilled by the Isabella Oil Development Co. of Mount Pleasant, which has developed four other good gas wells in the Broomfield Field and controls a large block of acreage. No. 2 Bartlett-McClintic, is the fourteenth commercial gas well to be struck in the Broomfield Pool since it was first explored two years ago. There are no dry holes in the pool.

Five sections of land make up the present pool in Broomfield Township, giving the pool an east and west length of approximately 2 miles and and a north and south length of 2 miles. Wells have been drilled in Sections 5, 4, 3, 10 and 9. As yet no test has been made in Section 8. The wells are scattered one to 40 acres in the five sections.

No. 2 Bartlett-McClintic (located in Section 3) does not add materially to proven acreage, but does bear out the belief that the gas vein extends considerably farther to the northeast than the field is developed. Eight of the wells in the Broomfield Pool are tied in to the Consumers Power Co. lines while the other six are capped in without a market. The withdrawal from the wells connected to a line is not near the potential output. Besides the 14 wells in Broomfield there are six in the Vernon in Isabella County, and seven in the McKay-Mercier Clare Pool, in Clare County.

In Vernon Pool the Gas Corporation of Michigan is taking steady production from several wells while in Clare Pool no commercial use has been made of the available output.

George W. Ratcliffe Chosen Chairman Natural Gas Department A. G. A.

ATLANTIC CITY, N. J., Oct. 15.—Approximately $3,000,000 will be expended by the gas industry during the next three years in a national advertising cam-

GEORGE W. RATCLIFFE

New Chairman, Natural Gas Department, American Gas Association

paign to bolster business, it was announced by Conrad N. Lauer, president of the Philadelphia Gas Works Co., addressing the second general session of the annual convention here of the American Gas Association.

Newspapers, magazines and other media will be utilized. The association appro-

FRANK L. CHASE

priation of $1,000,000 annually will be aside from an anticipated outlay of approximately $4,500,000 by individual companies in the next 12 months.

Clifford E. Paige, vice president of the Brooklyn Union Gas Co., censured legislation intended to eliminate utilities from the sale of appliances. He said that experiences of Kansas and Oklahoma where such bills had been passed had shown that no great amount of business, formerly done by the utilities, had been transferred to local dealers. This indicated, he said, that the only result of such legislation was to stifle merchandising.

Arthur Hewitt, vice president of the Consumers Gas Co. of Toronto, was elected president to succeed R. W. Gallagher.

Other officers elected were Howard Bruce, chairman of the board of Bartlett Hayward Co., Baltimore, Md., and N. C. McGowen, president of the United Gas Public Service Co., Houston, Tex., vice presidents; and William J. Welsh, president of the New York & Richmond Gas Co., Staten Island, N. Y., treasurer.

The natural gas department elected George W. Ratcliffe, president of the Manufacturers Light & Heat Co., Pittsburgh, chairman, and Frank L. Chase, vice president of the Lone Star Gas Co., Dallas, Tex., vice chairman.

Gas Association Warns on Curtailing Advertising

ATLANTIC CITY, N. J., Oct. 15.—Holding that there was danger in "indiscriminate retrenchment," speakers at the meeting of the publicity and advertising section of the American Gas Association cautioned against undue curtailment of advertising budgets as a means toward economy.

William H. Hodge of Chicago, divisional chairman, expressed satisfaction that reports revealed that the costs of advertising and publicity in the industry had decreased only about 10 per cent from the peak budgets of 1930. He said officers of the section believed retrenchment in advertising should be studied with extreme care during the present critical period.

"Bearing in mind that the employment of additional specialized ability is not now available, due to lack of funds," he said, "it is recommended that more complete utilization of advertising experts and publicity specialists at our headquarters be made and more co-ordination be given by individual members.

"Coincident with the depression has been a tendency to economize on art and typographical expense in connection with advertising. If we are to expect copywriters, artists and typographers, who do the real work, to continue to advance in efficiency and give sales value to white paper, we must not deprive them of all incentive to progress."

Other speakers urged greater effort for sales through national advertising and promotion plans.

Jay C. Barnes of New Orleans was selected chairman of the section for the coming year; Henry Obermeyer of New York City, vice chairman, and Allyn B. Tunis, New York City, secretary.

LAREDO RATE HEARING

SAN ANTONIO, Tex., Oct. 17.—The Texas Railroad Commission has recessed for 10 days its hearing of an appeal of the Texas Border Gas Co. from lower gas rates established by Laredo when testimony of a principal witness for the city was challenged.

Gas company attorneys challenged figures submitted by A. J. Neff, engineer and appraiser, and the commission recessed to consider the challenge and the city's plea that additional time be granted Neff to prepare his testimony.

New Conservation Rules By Kansas Commission

TOPEKA, Kans., Oct. 17.—The Kansas Public Service Commission has announced a new set of rules for the conservation of natural gas in the state. The rules were finally approved by the gas pipe line companies and the oil drilling operators in a meeting at McPherson. The proposal has been under consideration for several months, a gas conservation committee of 21 gas men, landowners and opertaors being named by the commission to study the problem and submit rules and regulations for conservation.

Thurman Hill, member of the commission in charge of oil activities, said that at the McPherson meeting he was told that sufficient gas was wasted in the McPherson oil field in the last 90 days to have supplied the city of Lawrence 35 years.

The new rules were promulgated under the oil and gas proration and conservation law enacted by the last legislature. They prohibit any driller intentionally drowning out gas or letting it escape into the air or into other strata underground; or using natural gas for the manufacture of carbon black when the natural gas has a commercial value for fuel. The rules require that when drillers go into an oil or gas bearing stratum they must take steps to confine the oil or gas within the shale until it can be utilized.

The commission requires that notice be given to it of all drilling operations or deepening of wells so that its inspectors may watch operations.

TEXAS GAS VALUATIONS

WICHITA FALLS, Tex., Oct. 17.—Members of the city council have been informed that the League of Texas Municipalities, including 239 cities, is planning to employ attorneys to represent all towns in the league served by the Lone Star Gas Co. or any of its subsidiaries. These attorneys will represent members of the league at the hearing to be held in Austin soon when the completed survey on valuations of the gas corporation's properties is presented to the railroad commission.

McLEAN, TEXAS, FRANCHISE

McLEAN, Tex., Oct. 17.—A 25-year franchise to serve McLean with gas has been granted to D. W. Humphreys, who agreed to have gas in the city mains by October 31.

The domestic rate will not exceed 30 cents a thousand feet, the manufacturing rate will be not more than 10 cents, and churches, schools and the city will be furnished gas for 12 cents. The old domestic rate was 50 cents for 1,000 feet.

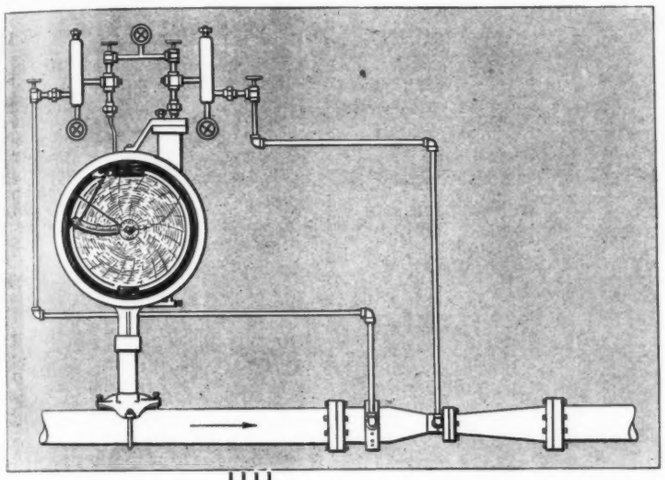
TO BUILD 14-MILE LINE

The Consolidated Gas Electric Light & Power Co. of Baltimore has filed petitions with the Public Service Commission of Maryland asking approval of its purchase of all of the outstanding securities of the Havre de Grace Gas Co., and the approval of the construction of a 14-mile high pressure gas main connecting the Havre de Grace system with the system of the Consolidated Gas Co.

TAX HEARING NOVEMBER 1

AUSTIN, Tex., Oct. 15.—Hearing by the Texas Railroad Commission on rates of Lone Star Gas Co. in numerous Texas cities, towns and rural communities has been called for November 1 at Fort Worth. The hearings follow the recent valuation and audit of the company's properties in Texas and Louisiana.

THE FOXBORO VENTURI METER FOR OIL FLOW MEASUREMENT.



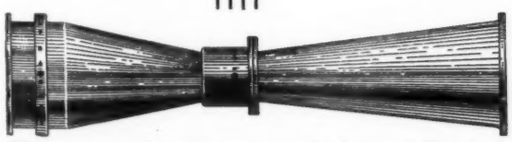
● For accurate inexpensive measurement of oil flow demand the
FOXBORO VENTURI METER

● It consists of a Venturi Tube which creates the differential pressure and a standard Foxboro Mercury Float Type Meter, which records the flow directly in gallons or barrels.

● You can obtain the same **outstanding results** with the Foxboro Venturi Meter that have been obtained with the Foxboro Orifice Meter on gas.

● The Foxboro Venturi Meter is the ideal instrument for oil metering because it is so simple, rugged and accurate and because it is easily installed—easily operated—low in first cost and maintenance.

● For **every oil measurement problem** consult Foxboro. Conditions may require installation of the Venturi Tube —the Orifice Plate—or the Flow Nozzle. Foxboro can supply all! Bulletin 173-J contains interesting information on liquid flow measurement. Write for it today—no obligation.



We can supply all types and sizes of Venturi Tubes made of cast-iron or cast-steel, and furnished with bronze or stainless iron throats. Write for prices.

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FIELD PROBLEMS FROM READERS

Edited by Thomas F. Smiley

This department is conducted in order that men connected with the drilling, producing or transporting branches of the petroleum industry may obtain aid in solving problems that confront them in their work. Readers are invited to send questions freely. These questions will be placed in the hands of persons capable of answering them authoritatively, and the answers, based on the best available information, will be published.

Each question should give as much detail as possible, especially if it involves depth of sands, types of sands and operations on adjoining or nearby properties. The source of questions will be considered confidential, and only the initials of the sender will be published. Questions involving patented processes, intricate formulas or estimates of cost cannot be answered. If an immediate answer is important, one will be given by mail when the writer requests it.

In this connection, The Oil and Gas Journal will be glad to publish articles from field men who have devised new methods or improved old ones.

Construction of Tester for Use Before Running Old Casing

We have a great deal of old casing on our racks which we would like to test before running with 600 pounds hydraulic pressure, applied from the inside. Would you please suggest a method of constructing a casing tester which would not entail too much expense?—H. F. K.

Information obtained through inquiry indicates that there is no standard method of constructing such a tester as you want, but each company or dealer having a problem of this kind works out something to do the job, usually utilizing such equipment as is available.

You first will need a substantial rack upon which each joint of casing can be mounted and held securely. This rack can be made out of timber or can be welded pipe. Whichever type of rack is built should be so designed as to permit the joint of pipe being moved up against a packing to close the open end.

To hold this packing, which can be rubber sheet packing or old belting, there should be a heavy block set vertically and securely braced so that the pipe can be pressed against it firmly and the open end actually embedded in the packing.

There can be movement in the rack or movement applied to the packing block or both. If the rack is stationary then the block carrying the packing should move and by a system of levers should travel toward the end of the pipe which has first been securely clamped to the rack.

There are several ways of clamping the casing to the rack and it is suggested that you use such equipment as you have at hand: pipe tongs, pipe grips, movable dogs or slips. There should be two supports or horses in the rack spaced about 12 feet apart so two sets of clamps will be needed.

To move the packing block forward toward the opend end of the pipe a set of levers giving parallel motion could be used or an eccentric that will move the block straight forward and clamp it tightly against the end of the pipe. Again this is a detail that you can best work out from material on hand.

After the rack and packer have been decided upon, it is next necessary to get a small high-pressure pump with fittings and gauge to build up the hydraulic pressure inside the pipe.

A flange or coupling can be used to screw on the pipe end and into this connection a smaller pipe is screwed leading from the pump. This should be made up so as to permit easy handling in setting up and breaking down and should be leakproof when the joints have been made.

A small hydraulic pump may be obtained from some supply stores but usually they are made out of a heavy short nipple screwed into a steel block. The block is fastened to a heavy board and the nipple is held in a vertical position with its open end at the top.

Over this open end is fitted a packing gland, and a plunger passes through this gland with a piston on its lower end so that water can be forced out of the lower end of the nipple and into the joint of pipe to be tested.

It is usual to supply the water for the test from some local pressure system such as the city water supply and in this way the joint of pipe is quickly filled with water at this original water pressure and the pressure is built up by the use of the hand pump.

A gauge is placed in the system between the pump and the joint of pipe to be tested so that the operator has before him at all times the amount of pressure being applied to the pipe under test.

After the test on one joint is completed the connection between pipe and the water system is broken and the pipe removed from rack and another joint put in its place for test.

As already stated, details of a device for testing your casing would have to be worked out to fit the material available. If you desire it, a sketch of the outfit described here will be sent to you.

Comparison Made Between the Seismograph and Core Drill

I would like to know how the information obtained from using the seismograph compares with that obtained by core drilling; also how the costs compare.—S. E. F.

The functions of the seismograph and the core drill are so dissimilar as to make comparison difficult. The seismograph is one of several geophysical instruments designed to aid in finding underground structures favorable for the accumulation of oil. The core drill, by providing actual specimens of strata penetrated, affords positive information concerning underground conditions at the spot selected for a test. The seismograph and other geophysical instruments indicate probabilities (or improbabilities) of the existence of oil in a given area. No pretense is made that they will do more. The core drill yields positive facts. One device gives a check on the other. Large operating companies use both appliances.

Cores may be taken in either of three ways, with the diamond drill, obtaining virtually perfect specimens of the formations penetrated; with the cable-tool core barrel, the core barrel replacing the standard bit at the end of the drill stem, and with the rotary, in which case a core barrel, provided with "black diamonds" or some other extremely hard cutting material, is used. The samples obtained with the cable tool core barrel by percussion are referred to as "pancakes" because of their shape. The samples obtained with the rotary bit are cylindrical and more nearly approximate those taken with the diamond drill.

It is assumed that your question refers to the diamond drill method. Use of the diamond core drill to a depth of 2,500 feet is no longer anything unusual. Besides the lighter types of diamond drills used for drilling 100 to 300 feet and driven by hand or small-powered engines, manufacturers have developed steam and air-driven machines requiring 45 to 85 horsepower for their operation. These larger machines drill holes 3 to 18 inches in diameter to a depth of 7,500 feet.

The cost of diamond drilling varies with differing conditions just as the cost of cable tool and rotary drilling varies. It would be virtually impossible to name an average cost.

So many factors enter into the cost of geophysical prospecting that the figures vary widely in accordance with conditions. If you are interested in the cost of seismograph work in any particular locality it might be well for you to get in touch with some company that has done some of the work in that district.

Why Was It Called That?

BABBITT METAL

Babbitt metal gets its name from Isaac Babbitt, of Boston, Mass., who invented it in 1838. The metal is a soft, white, antifriction alloy, prepared by melting separately 4 parts of copper, 12 parts of tin and 8 parts of antimony, to which when it is completely melted 12 more parts of tin are added. It is distinguished as the hardest and highest bearing value alloy. For his invention Babbitt received a gold medal from the Massachusetts Charitable Mechanics' Association in 1851. Congress voted him $20,000. He was a goldsmith in his early life and in 1824 manufactured in Taunton, Mass., the first Britannia-ware made in the United States. After inventing the alloy which bears his name he manufactured it extensively. He manufactured a soap also. He was born in 1799 and died in 1862.

Method of Finding Approximate Pressure Drop in Well

Can you supply a formula for estimating the pressure drop in artificially gas-flowed oil wells for a given quantity of gas passing between the casing and the tubing in order to estimate the pressure on the pay? If such a formula is unavailable, can you give me a formula for estimating the pressure drop inside the tubing for a given quantity of oil and gas passing from the bottom of the well to the surface of the ground?—J. B. O.

So far as this department has been able to ascertain, there is no formula for estimating the pressure drop in artificially gas flowed oil wells for a given quantity of gas passing between the casnig and the tubing. It is reported that experimental work has been done on this problem in the laboratory, but that the results obtained were not applicable to actual field conditions.

In the oil well there is a condition different from that which would be set up in a laboratory with short lengths of smooth pipe. The couplings on both the tubing and the casing would have some effect upon the flow of the gas from top to bottom of the well.

There is a way of ascertaining the approximate drop in pressure by mounting a pressure gauge on the discharge line at the surface leading away from the casing and placing beyond the pressure gauge a valve which can be closed in.

By first flowing gas into the annular space between tubing and casing through this connection and then closing in the valve the pressure drop will be noted on the gauge. This drop will continue to some point which will be the low pressure registered and the pressure then will begin to increase. The difference between the lowest pressure registered and the input pressure will give an approximate indication of the pressure drop under the conditions you outline.

In The Oil and Gas Journal of October 6, 1932, you will find a paper by T V. Moore and R. J. Schilthuis, Humble Oil & Refining Co., Houston, Tex., on "New Hypothesis Developed for Calculation of Pressure Drops in Actual Flowing Wells" which we believe will give you an answer to the second question in your letter.

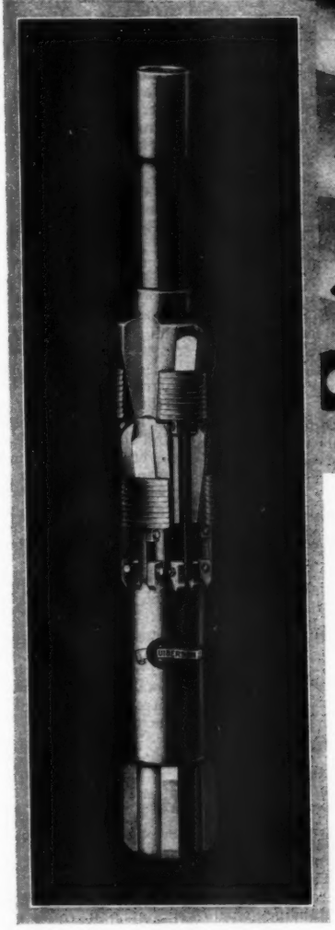
Early Wells in the Cushing Field Are Subject of Controversy

To settle a controversy I wish you would tell me the location of the discovery well in the Cushing Pool, its depth, the date of its completion and who the drilling contractor was. If you can inform me about a few of the other early wells in that field I will be much obliged.—H. I. Y.

Records show that the discovery well in the Cushing Field was drilled on the F. M. Wheeler farm, Section 32-18-7. It was completed April 1, 1912, in the Wheeler sand, found at a depth of 2,194 feet. D. H. Gruver was the drilling contractor. The well was owned by C. B. Shaffer, who previously had put down four other wells in the district, 5 miles apart, all dry holes. The next producer was the No. 2 Wheeler, owned by J. K. Gano and completed August 30, 1912. Nos. 3, 4 and 5, owned by Dale Shaffer and Steiner, followed. Mr. Gano drilled No. 6, Dale Shaffer No. 7 and W. C. McBride No. 8.

DISTRIBUTES SHOCKS EVENLY

THE LATEST GUIBERSON DUPLEX CATCHER



. . . BEARING GREATER WEIGHT WITHOUT DISTORTION to CASING

Designed especially for the safety of tubing in deep wells, the Latest Guiberson Duplex Catcher has six slips, actuated by a common means, which grip the casing walls over the entire 360° and for considerable depth, reducing the danger of distortion to casing and catching the heavier column of tubing precisely as before, within three inches. Strong spring now enclosed, operates without the need of fluid in the hole. Heavy striker weight overcomes the retarding action of mud and paraffin. The Latest Guiberson Duplex Catcher means greater safety for tubing in all depth wells. *Fully patented*

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BETTER BE SAFE THAN SORRY

TECHNICAL QUESTIONS ANSWERED

By Charles K. Francis, Ph. D., Technical Editor

This department of The Oil and Gas Journal is devoted to the manufacturing branches of the oil industry.

Those connected with the refining of crude petroleum, the manufacture of natural gasoline and closely allied industries are invited to submit their problems to Dr. C. K. Francis, technical editor. The department was created for the purpose of aiding managers, superintendents, engineers, chemists and all those engaged in the various phases of plant operation; also those connected with marketing and utilization of petroleum products.

Questions should be submitted in as much detail as possible so as to assure a satisfactory answer.

All inquiries should be signed and if other than the given initials are to be used please indicate the desired letters.

Questions involving patented processes, intricate formulas, and calculations and estimates of costs, for obvious reasons, cannot be answered. The replies will appear on this page within a reasonable time.

Debutanizing Column Used for Making Stabilized Gasoline

Will you kindly explain the particular type of refinery equipment known as a debutanizer? I would appreciate knowing its fundamental purpose, the manner in which it functions, and the part it plays in refinery operation.—R. F. C.

A brief review of the history of gasoline manufacture will make it easy to understand the purpose of the debutanizing unit.

The most volatile portions obtained from petroleum by distillation are combined in the liquid called gasoline. However, there are many grades of gasoline, the different kinds being classified at the present time, on the basis of gravity, vapor tension, volatility, knock rating, etc. When gasoline began to be an important commodity, about 1912, much of it was found lacking in volatility, that is, it had a high initial boiling point. So the refiner took advantage of what was then a new product, the gasoline extracted from natural gas. This was known as casinghead gasoline, from the fact that it was derived from gas which had been associated with oil, the gas being taken off from the well at the casinghead. The casinghead gas was then processed, the liquid being obtained chiefly by compression and cooling. The tendency was to use high pressures so that a large volume would be obtained.

Casinghead gasoline from 1912 to 1916 was of two kinds, wild and weathered, the weathered gasoline being that which had been stored long enough in a vent tank for the extremely volatile portions to escape. This weathered gasoline when added to the refinery gasoline, produced a blend with a low initial boiling point which had excellent starting qualities as a motor fuel. The difficulty experienced with natural gasoline, the modern name for casinghead gasoline, was that the conditions of manufacture permitted too large a percentage of the lighter hydrocarbons to remain. This resulted in a liquid which evaporated rapidly and had a high vapor tension. The product was improved when the vent tank was replaced by a fractionating column, sometimes called a stabilizer.

While the natural gasoline industry was making this progress the petroleum refiner was succeeding in making his product more volatile through the introduction of towers, improved condensing equipment, development of cracking and the recovery of gasoline from refinery gases. The volume of very volatile gasoline made by both branches of the industry became so large that specifications were introduced for the purpose of limiting the gasoline to the hydrocarbons that were most stable under normal conditions. The most important of these are the recovery on distillation and the vapor tension at 100°F.

It was recognized that the hydrocarbons propane, butane and isobutane were objectionable constituents for a motor gasoline. The boiling points of these are propane —44° F., butane 31° F., isobutane 10° F. The pressures of the liquid at 100° F. are propane 172 pounds per square inch, butane 37.5 pounds, isobutane 59 pounds. The unit designed for the removal of these hydrocarbons is known as a debutanizer.

The essential parts of a debutanizing unit include a fractionating tower of the bubble plate type, a still or reboiler, heat exchanger and condensing system. The still is located at or near the bottom of the tower.

The vapors or light fractions removed from the incoming pressure distillate, from the refinery, flow upward through the tower and that portion which remains as a liquid is withdrawn from the bottom of the tower as a debutanized product, the denuded gas passing off at the top. Vaporization, condensation and absorption all take place in the tower. Control of the operation is maintained by varying the temperature at the bottom and varying the volume of the reflux pumped in near the top. The unit is sometimes operated at high pressure. The stabilized gasoline fraction is passed through a cooling system to storage.

The results obtained in a debutanizing unit are shown in the table:

Hydrocarbon:	Feed	Bottoms % by volume	Overhead
Methane ...	0.05	.....	0.28
Ethane	.65	.....	4.19
Propane	2.24	.....	14.69
Butanes	6.58	0 70	39.46
Pentanes ...	8.32	4.91	26.30
Hexanes plus	82.16	94.39	15.08

The description given here is simply an outline of the essential principles. Further details may be obtained from The Oil and Gas Journal, W. T. Ziegenhain, January 21, 1932, and Raigorodsky and Rector, July 21, 1932.

First Gasoline Pipe Line Built in California by Shell Oil Co.

What was the first pipe line used for the transportation of gasoline, that is, a line of major importance? —W. H. N.

The Shell Oil Co. of California established a pipe line in 1927 for the transportation of gasoline from Ventura to Wilmington, a distance of 97.5 miles. This line may be considered to be the first for the long distance transportation of gasoline, the product being natural gasoline.

The first long line used for the transportation of motor gasoline from the refinery to markets was that of the Standard Oil Co. of New Jersey. In the fall of 1929 this company began transporting motor gasoline inland through its Tuscarora pipe line from its Bayway refinery, New York harbor, through New Jersey to Cook's Ferry, on the Ohio River, northwest of Pittsburgh, Pa. The length of this line is about 365 miles. The pipe line had formerly been used to transport crude oil from fields in western Pennsylvania to the Bayway refinery. In August, 1931, the total length of motor gasoline pipe lines in operation or under construction in the United States was 3,8.0 miles and their total maximum delivery 89.000 bbls. per day.

See The Oil and Gas Journal, June 4, 1931, pages T-27 and T-59.

Origin of S.A.E. Numbers for the Classification of Lub Oils

Would you please publish on your page how the S.A.E. numbers on lubricating oils were arrived at and what the specifications are for each S.A.E. number? There has been so much conversation and lack of information on this subject that I feel it would be advantageous to us all.—G. E. G.

It had been the practice for some years to classify lubricating oils with reference to viscosity by means of such terms as extra light, light, medium, heavy and extra heavy. The Federal Specifications Board placed certain valuations for these terms, as may be illustrated by reference to the specification for Class A lubricants as follows:

Viscosity—Method 30.41 (Saybolt Universal). The viscosity of the five grades of oil at 100° F. shall be within the following limits:

Grade—	Seconds
Extra light	135-165
Light	180-220
Medium ..	270-330
Heavy	360-440
Extra heavy	450-550

It will be noted that there has been no effort when making up this specification to set a definite separation from grade to grade and the trade frequently found difficulty in placing the grade of oil when the viscosity was found to be between any two grades. The terms light, medium, heavy, etc., were more often used without an understanding as to what was meant.

The S.A.E. numbers (Society of Automotive Engineers) were chosen for the purpose of designating the grade of motor oils which would have a quite definite meaning as to viscosity. These numbers, based on a plan proposed by H. C. Mougey, General Motors Corp., were selected with the help and advice of Committee D-2 on Petroleum Products and Lubricants of the American Society for Testing Materials. After a very thorough canvass of the numerous lubricating oils on the market, a tabulation of their properties was made and the various oils separated into their different groups.

There were several systems proposed for naming these groups, such as No. 1, No. 2, No. 3, etc., or A, B, C, etc., or 100, 200, 300, etc. But the numbers 10, 20, etc., were finally chosen. There are no gaps in the limits of viscosity between the various groups as listed in the present S.A.E. table so that all motor oils from the lightest to the heaviest are included. As has been indicated, these numbers are arbitrary numbers and bear no direct relation to the viscosities of the oils with the exception that the higher the S.A.E. viscosity number, the higher the viscosity of the oil at the temperature at which the classification is made.

For the S.A.E. numbers, as listed at the present time, see this page issue of September 15, 1932, under Transmission and Differential Lubricants.

Coke Is Residue From Either Petroleum or Coal

It is claimed that coke is only derived from coal but it is my understanding that coke is also manufactured as a by-product from the refining of crude oil. Is this true? Is coke ever made from natural gas?—C. G.

Coke may be defined as the residue from the destructive distillation of coal, the process for making it being similar to that used for making charcoal from wood. Petroleum coke is obtained on the same principle; that is, the heating of the oil is continued until there are no more liquid products evolved and the residue remaining in the still is coke. Some coke is produced as a residue in the manufacture of gas from coal, but the larger part of the coke of commerce is made from selected coals so that the coke will be suitable for use in the blast furnace and for the heating of metals. There are several different methods and types of ovens employed for making coke. Usually petroleum coke is obtained as a residue in a still, but there are special ovens designed for treating the heavy residuals from petroleum oils and these are operated in a manner similar to the ovens used for making coke from coal. A special oven of this kind was described by W. T. Ziegenhain in The Oil and Gas Journal, September 10, 1931. See this page September 8, 1932.

Petroleum coke is noted for its purity and low ash content. The composition of petroleum coke and coke is indicated in the table:

	Petroleum coke	Coke from coal
	% by weight	
Moisture	0.40	1.2[illegible]
Fixed carbon	92.58	86.6[illegible]
Volatile	6.30	1.6[illegible]
Sulphur	.60	.7[illegible]
Ash	.72	10.4[illegible]
	B.t.u.	
Heating value	15,019	12.56[illegible]

The special oven above mentioned, approximately 10'x30', is made of tile. Any accumulation of oil and coke on the floor of the oven seals the cracks between tiles. The heavy hot oil is run into this oven where the final distillation takes place. The handling of the coke resembles the standard practice of the usual by-product coke plant for the destructive distillation of coal. The equipment includes a ram for the quick removal of the coke bed from the floor of the ovens, a dump car and a quenching station.

When natural gas is burned without enough air to complete combustion, the flame is smoky and it is from this flame that the soot-like substance known as carbon black is obtained. Coke has not been made, as a commercial product, from natural gas.

When Is Equipment Obsolete

OBSOLESCENCE is not merely a matter of years.

The discovery of a new principle, the development of a new process, renders obsolete, overnight, equipment which was modern only yesterday. This is particularly true of the petroleum refining industry — an industry in which the only opportunity for profit, today, lies in the reduction of production costs.

There are new processes, new engineering developments, which produce greater yields at lower costs. How much do they save — per barrel, per day, per month? How much do these new facilities cost? How soon does the new equipment pay for itself?

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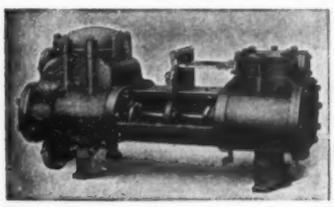
NEW AND IMPROVED EQUIPMENT

Worthington Introducing New Line of Steam Pumps

An improved line of horizontal duplex steam pumps, especially designed and fitted for handling either water or chemical solutions, has been announced by the Worthington Pump & Machinery Corp., Harrison, N. J. Built in three different types—valve plate, turret and pot valve—these units incorporate unusual features, including stainless-steel drop-forged valve service on all models.

The valve plate type pumps have the discharge valves screwed into a common removable deck. These units are of the



submerged piston type with all suction and discharge valves above the cylinders. Valve service is of the disc type, and all pumps have the standard duplex steam end.

For transfer, tank, circulating, boiler feed and water supply service, units of this group are standard fitted and have forced-in liners and screwed stuffing boxes. For collecting condensate returns from heating systems and returning them to the boiler, these pumps are furnished complete with receiver and automatic float control. For handling brine, caustic solutions and special liquids, the units are all-iron fitted; for handling acids and acid solutions they are all-bronze throughout. This group covers capacities from 5 to 320 gallons per minute at pressures up to 250 pounds per square inch.

Turret type pumps have the suction and discharge valve decks cast integral with the cylinders, are of the submerged piston design and have disc type valve service. Suction valves are accessible through handhole plates and discharge valves through the top cover. Stuffing boxes are of the bolted type with bolted glands.

TRACK WAGONS SENT TO IRAQ

The Allis-Chalmers Manufacturing Co., Milwaukee, Wis., has shipped to Asia Minor 26 track-type trailer wagons for pipe line construction work. The same order, placed by the Iraq Petroleum Co., called for 11 track-type tractors. This equipment is to be used in the construction of a pipe line from Kirkuk, north of Bagdad, to the Euphrates River, and two lines from there westward, one going to Tripoli and the other to Haifa on the Mediterranean. These lines pass through Iraq, Syria, part of Arabia and Palestine. The new 30-ton Allis-Chalmers pipe wagon is equipped with 15-ton capacity drop-forged tracks, similar in design to those used on Allis-Chalmers track-type tractors.

APPOINTED SALES ENGINEER

The Maintenance Engineering Corp., Houston, Tex., has appointed A. J. Hooper, as sales engineer, to assist in the promotion of the more technical specialties for refineries, pipe lines and power plants, particularly water-conditioning in connection with Hall Laboratories, Inc., the Buromin Co., and the Hagan Corp., of Pittsburgh, Pa. Mr. Hooper is a graduate of Tulane University, class of 1929.

Notes About Trade Literature

The Greenfield Tap & Die Corp., Greenfield, Mass., is distributing a folder describing and illustrating its Slipon rethreading dies with GTD ratchet stocks.

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The Pittsburgh Equitable Meter Co., Pittsburgh, Pa., has issued a 16-page catalog entitled "Pittsburgh Oil and Gasoline Meters for Bulk Stations, Refineries, Tank Trucks and Pipe Lines." It describes and illustrates piston meters, disc meters and current type meters.

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An illustrated 144-page catalog on steel chains issued by the Link-Belt Co., 910 South Michigan Avenue, Chicago, brings information regarding older chains up to date and offers new sizes for the first time.

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The Caterpillar Tractor Co., Peoria, Ill., is sending out its first piece of literature for the winter of 1932-33, a broadside describing and picturing the use of the Caterpillar in snow removal.

—

Bulletin 405, sent on request by Hiergesell Brothers, 2518 North Broad Street, Philadelphia, Pa., gives information about the new sensitive control thermo-regulator put on the market by the firm.

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An illustrated circular, "New Speed and Power for Pipe Handling," has been issued on the Trackson highway pipe layer. It may be obtained from either the Trackson Co., Milwaukee, Wis., or the Highway Trailer Co., Edgerton, Wis.

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The Marmon-Herrington Co., Inc., Indianapolis, Ind., has issued a folder giving specifications of the all-wheel-drive truck-tractor and trailer equipment especially designed and built for the Iraq Petroleum Co. for use in constructing the pipe line from Iraq across the Syrian desert to the Mediterranean Sea.

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The Truscon Steel Co., Youngstown, Ohio, has prepared two folders, both obtainable on request, one describing Truscon Ferrocoustic roofdecks and the other Silentaire, a new nonmechanical muffler for double-hung windows.

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An illustrated 24-page booklet, "Engineering Data on Large Hypoid and Spiral Bevel Bears," sent on request by the Gleason Works, 1000 University Avenue, Rochester, N. Y., contains complete information on the design, application, efficiency, speeds and horsepower transmission of these two types of bevel gears besides standard specifications from which the engineer can select gears suitable for his installation.

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The Riise drilling engine, Model X-100, is described and illustrated in a bulletin obtainable from the Riise Engineering Co., Columbiana, Ohio.

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The U. S. Thermo Meter Co., 8811 West Thrd Street, Los Angeles, Calif., has issued a circular describing its latest tank wagon meter.

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The Caterpillar Tractor Co., Peoria, Ill., has available for applicants a 36-page catalog describing and illustrating the Caterpillar Thirty-five, which replaces the Caterpillar Thirty.

Among the Equipment Houses

J. E. McFate, formerly associated with Jones & Laughlin Steel Corp., has been appointed a sales representative of Republic Steel Corp., Youngstown, Ohio, in the New England territory. Mr. McFate's headquarters will be in Boston, Mass.

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The Young Radiator Co., Racine, Wis., reports that production of varied copper heat transformer products continues at an advanced level over the first half of the year. Former employes were taken back in July and continued with steady overtime and part night shifts in several departments.

—

F. A. Merrick, president Westinghouse Electric & Manufacturing Co., has announced that his company is prepared to spend $1,260,000 for raw materials, supplies and development work that will open up extensive new markets for electrical equipment. "We are influenced to expand our usual purchase program at this time beyond our normal requirements," said Mr. Merrick, "in the belief that the low point of the depression has been passed and that the economic forces now at work will provide the needed stimulus to re-establish public confidence and increase business activities."

—

The Mission Manufacturing Co., Houston, Tex., has appointed George Luck to conduct field tests on new Mission products, as well as tests connected with improvements made on established products of the company. Mr. Luck was formerly with the Reed Roller Bit Co.

—

In anticipation of improving conditions in petroleum, mining, public utility and general industry the E. D. Bullard Co., manufacturers and distributors of mining and industrial safety equipment, has enlarged its facilities in Salt Lake City, Utah, and Houston, Tex. "We think that the last half of 1932 is the start of a new period of reconstruction and progress," said E. W. Bullard, president.

—

The General Electric Co. is pushing the construction of its big new power plant in Schenectady, N. Y., which will cost $4,000,000. The final stack has been put in place and the prospect is that the plant will be ready for operation next spring. It was decided to finish the project at this time because construction costs are low and because it provides work for General Electric employes as well as for employes of other producers and transportation companies.

M-H-L CO. FORMED IN HOUSTON

Organization of the M-H-L Co., which will manufacture and lease a new drill stem testing tool designed by G. A. Humason, has been perfected in Houston, Tex., with M. Manning, president of the Houston Oil Fields Material Co., president; G. A. Humason, vice president, and J. A. Logan, secretary-treasurer.

Pittsburgh Equitable Has New Direct-Reading Meter

Announcement has been made by the Pittsburgh Equitable Meter Co., Pittsburgh, Pa., of a new Emcorector, the Type I. This new type will be manufactured in addition to the present Type T and Type W. The Type I differs from the other types in that it is not equipped

with a chart for recording metering pressure and volume. Instead there is an indicating pressure scale, visible through a glass in the case, by which the static pressure under which the meter is operating can be determined at all times.

The new Type I, like the two other types, gives a direct reading of volume computed to any base pressure, regardless of line pressure fluctuations. Thus its installation makes the meter a direct reading meter and eliminates the necessity of making chart calculations.

New Bulldozer for Use on Caterpillar 65 Announced

A new hydraulically operated bulldozer has been developed by the LaPlant-Choate Manufacturing Co., Inc., Cedar Rapids, Iowa, to be used on the "Caterpillar" 65 tractor. This bulldozer has been designed to have both up and down pressure on the blade. It has an extreme 34-inch high lift above ground level and an 18-inch drop below ground level. The tractor drawbar is in the clear at all times, making it possible for the tractor to be used for hauling wagons, tampers, scrapers, etc., without removing any part of the bulldozer.

Special shock absorbers are provided to absorb any sudden jolts before they are transmitted to the operating mechanism, thus minimizing the chances of breakage and assuring ease of operation. The LaPlant-Choate Hylift bulldozer is hydraulically controlled, the control lever being placed within convenient reach of the tractor operator. LaPlant-Choate Manufacturing Co., Inc., announces that it is in production on this equipment and can make immediate delivery on these machines.

TO CARRY WAREHOUSE STOCKS

The Petroleum Equipment Co., and the Oil Field Engineering Co., Fort Worth, Tex., jointly announce the appointment of the Oil Field Specialty Co., of Houston, Tex., to warehouse stocks of these two manufacturers for the jobbing and retail trade in the Gulf Coast region. Products included are Ofeco-Wilcox wrist pins, Bal-Re-Nu check valves, Nu-Alloy balls and seats, Petro oversize standing valves, and Robinson packers. The Oil Field Specialty Co. recently moved from its original location in Velasco Street, Houston, to larger quarters at 2301 Commerce Street, where both office and warehouse are maintained.